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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

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Manufacturers' Record.

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Editor and General Manager.

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General Staff Correspondent.

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BALTIMORE, APRIL 28, 1899.

On another page of the Manufacturers' Record is published an interesting article from the New York Sun discussing from a popular yet accurate standpoint the results of the cylindrical-baling processes compared with the old square bale.

Rectifying a Mistake.

In announcing that it will continue for another year its advertisement in the Manufacturers' Record, the Earl & Wilson Co., proprietors of the Earl & Wilson patent improved sectional grate-bar, of Gastonia, N. C., writes as follows:

We are sorry that we did not confine our advertising exclusively to the Manufacturers' Record instead of scattering it around. Every other advertisement has proven an entire loss to us. Your paper reaches most of the people who use our goods; hence we have decided to limit our advertising this year to your columns.

And all advertisers may draw from this the moral that when you find an advertising medium which brings satisfactory results it is well to stick to it.

Went to the Right Spot.

The Republic Iron & Steel Co., which has been fully organized with a capital stock of \$25,000,000 preferred and \$30,000,000 common stock, has closed the contracts for the purchase of the Thomas Iron Co.'s property at Birmingham, the Birmingham Rolling Mill and the Gate City Rolling Mill, just outside of Birmingham. In the purchase of these properties the Republic Company has displayed greater wisdom than any of the other immense iron and steel combines, for it has recognized the fact that to get the very best results it must secure producing facilities at the point of cheapest possible production. Of course, the Virginia Iron, Coal & Coke Co. and the Empire Iron & Steel Co. have secured some excellent Southern properties, but of the great combines of national scope, the Republic is the first to do what the others must necessarily do—that is, get a hold in the Southern iron regions. This company will have \$6,500,000 cash for working capital and for other corporate purposes. It is generally reported that the company will build a large steel plant at Birmingham, and if so, this will still further add to the wonderful industrial activity of that district.

A Texan Conspiracy.

Texas has been in the throes of a vast conspiracy during the past two weeks. Some of its statesmen, impressed no doubt by the havoc threatened by the Arkansas anti-trust law to interests which very foolishly place the material welfare of the State above party politics and demagogery, have supported a duplicate of the Arkansas law before the Texas legislature. Simultaneously the business men of Texas have almost spontaneously begun a scheme which, if successful, will permit Texas to be devastated by investments of enterprising capital for the development of its resources. The boldness of these business men is appalling. At San Antonio 150 of them dared to adopt a resolution protesting against the anti-trust law as "a species of vicious legislation so disastrous in its operations if it becomes a law as to virtually paralyze every industry of the State." Several thousand telegrams from all sections of the State were received by individual members of the legislature, their general tenor being that the passage of the bill would mean foreclosure of loans, general paralysis of trade, and leaving unprotected grain, lumber, cotton gins, merchandise and all other property. These telegrams were from manufacturers, bankers, merchants, insurance agents and others, the telegrams from Texas being supplemented by some from Arkansas. A typical one from the latter State was from Helena to the Cotton Exchange of Houston, as follows:

Six hundred bales of cotton shipped from here to Memphis last week and 1000 going today in order to obtain fire insurance; compresses deprived of considerable profit thereby. Building and loan association risks on which policies are expiring are to be foreclosed and no new loans are being made, although many applications are being made. Plant of Missouri Hoop Co. burned Sunday morning, without a dollar of insurance, entailing a loss of \$15,000. New concern just under way and had applied for insurance same week the anti-trust bill went into effect; will not be rebuilt and the community loses benefit of \$400 weekly payroll and \$600 timber bill. Business men badly demoralized.

Even the Houston Post, while defending, of course, the proposed measure, gave a squint toward the business men when it said:

So far as the extreme feature of the bill which applies to fire insurance companies is concerned, and which seems to have caused considerable commotion throughout the State, the Post does not think there need be any undue apprehension. It is a very reasonable proposition that it will not pass, and it ought not to pass. While the Texas legislators desire to curb the trusts, they do not wish to jeopardize the business interests of the State.

Telegrams from Arkansas have also been received urging the passage of the bill. Light seems to be thrown upon these telegrams by an interview with the Galveston News by Mr. M. A. Shumard, whose company retired from business in Arkansas twenty-four hours after the law went into effect. He said:

The bill is really ludicrous, especially so when we understand that not only the

United States is included in the scope of its operations, but the whole world. Texas is a great State. No one has a more profound respect for it than I, but really Texas can't regulate the earth. I wish it could.

I notice in the afternoon paper the telegrams being sent by promoters of the Arkansas bill at Little Rock urging the legislature of Texas to "stand by their guns," etc. The real reason for those telegrams is this: The promoters of this bill in Arkansas have heard from the people in no uncertain way. They know they will never return to the legislature of that State. They could not, in many cases, be elected notary public in their districts. Now they are in a bad shape. Their political aspirations have received a sudden and telling blow. Their goose is cooked, and they know it. Now, they think that if Texas will pass this bill it will be some indorsement of their course. They feel that it would tend to get them out of the hole. They believe further that Texas and Arkansas passing this bill, that while Arkansas alone could not force the companies out of all boards all over the world, Texas and Arkansas could. Backers of the bill in Arkansas do not hesitate to openly say so. Nor did they hesitate to say that Texas would pass this bill. They feel, therefore, that their own jobs in the future depend largely upon what Texas does with this matter. Their own personal interests are the impelling motive back of these telegrams.

Whether the legislature of Texas will be willing to be used by a few designing political aspirants in Arkansas and throw the business of Texas into chaos, that these people in Arkansas may get some new job, remains to be seen. For my own part, I don't believe the Texas legislature is made of that sort of stuff.

If this reasoning be true, the conspiracy of business men of Texas becomes even more terrible than appears on the surface. It would be an outrage for property to be protected and for the stability of material business interests to be maintained at the expense of the possibility of the retirement of statesmen to well-earned rest.

A Southern Success.

In announcing at the annual meeting of the Graniteville Manufacturing Co. that he would not be a candidate for re-election, President H. H. Hickman presented the following striking facts illustrating the success of a well-managed Southern mill:

When you placed me in charge of your property thirty-one years ago the machinery and real estate were in a dilapidated condition, with a debt of \$50,000 and without any funds and with no credit. The first year we manufactured 5536 bales of cotton, producing 6,982,691 yards of poor goods. The stock was then selling at sixty cents on the dollar.

Since that time I have paid the stockholders \$1,800,000 in dividends, paid \$160,000 for stock in order to reduce the capital stock from \$716,000 to \$600,000, as at that time the capital stock was more than the value of the property.

I paid \$20,000 to perfect titles to the property, paid \$31,000 to educate the children of the operatives and delivered to the United States government or its representatives \$20,000 worth of goods, which was due under contract to the Confederate government, and \$60,000 cotton war tax. During the first twenty-five years I expended on the Graniteville Mill property \$250,000, and presented you with the Vaucluse Mill, which cost \$361,513.24.

Since that time, from 1893-1899, I expended on improvements \$44,056.77 and paid for new machinery \$145,376.89. I leave you to amuse yourselves by adding up the figures to find the grand total.

From the report just submitted you will find that during the last fiscal year we manufactured 15,332 bales of cotton, producing 20,756,820 yards of cloth. Note the increase since the first year I had charge. The stock is selling today at \$150 and worth \$200.

My report shows a surplus of \$655,930.30. Now it may be said that the Vaucluse Mill is not worth its original cost, but I do not admit this, as the increased production and new machinery placed in the mill make it more valuable now than when it was built. To make my statement doubly sure, you may strike out from it \$55,930.30, and you will then have a surplus equal to the capital.

During the past year the company had made and paid a 10 per cent. dividend, and has carried to the surplus 2 per cent. The spindles earned \$94,646.17, of which \$71,999.29 were net earnings.

This statement is but another chapter in the history of a Southern manufacturing company which has for a number of years progressed from one improvement to another. The particularly gratifying feature of the exhibit is that it is made by a company representing mills which were a success before the war, and which have emerged from the ruin wrought by the war to take a front rank among latter-day Southern successes, many of which have had all the advantages of the new conditions without any of the drawbacks of the old.

The South the Gainer.

In an exceedingly interesting review of the work of John Skelton Williams in connection with the development of the Seaboard Air Line system, which is given in this issue in an interview with Mr. D. A. Tompkins of Charlotte, one point is worthy of special notice. Referring to the supposition that the development of the Seaboard system might in some possible way be injurious to the Southern Railway, Mr. Tompkins very rightly takes the position that the Seaboard "will not injure the Southern in the slightest degree," and then gives his reasons for it. The Manufacturers' Record very fully agrees with Mr. Tompkins on this point. There is room enough in the South for these two systems, operating absolutely independently, to prove powerful factors for Southern development and profitable to their owners without in any way injuring each other.

The Southern Railway, under its present management, has been a power for good in the South. It has taken an active part in attracting the attention of the world to the advantages of the South for the business man, the manufacturer and the farmer, and it has pursued a broad and liberal policy looking to the encouragement and upbuilding of the entire section tributary to it. It is a matter for general congratulation that this policy of the Southern Railway has greatly lessened the spirit of hostility, which some years ago was unfortunately so strong in the central South against railroads and corporations. The people see that as rapidly as the work can be done the Southern

is taking the lead in the development of their country.

That the consolidation of two or three systems into the Seaboard will broaden the opportunities for the work of that road and open up a greater field of activity in passenger and freight business is, of course, unquestionable. But there is room enough for this, and room enough for all the work that these two great systems can do under the broadest and most progressive management without coming in conflict, and the Manufacturers' Record is sure that Mr. Tompkins is right in saying that the upbuilding of the Seaboard system will not in any way whatever injure the Southern. If this were not true the South would suffer rather than be benefited by the broadening out of the Seaboard system, for the prosperity and advancement of the Southern Railway is most intimately linked with the prosperity of the South itself.

A Founder in Fact.

Shreveport, La., for several years a splendid illustration of the results of the encouragement of home enterprises by local capital, has added to its enviable record the raising within less than three months \$100,000 for the erection of a cotton factory. There are about 350 shareholders, including nearly every leading business man of the city, and it is announced that the operations are to begin as soon as possible. The company will be incorporated as the Hargrove Cotton Manufacturing Co., Limited, and the mill will be known as the Hargrove Mill No. 1, in honor of Mr. H. H. Hargrove, one of its directors, whose practical campaign, under the auspices of the New Orleans Picayune, has resulted in starting definite movements for mills in three places in Mississippi, five in Louisiana, with other points in Louisiana, Arkansas and Tennessee seriously considering projects of the kind. The compliment is well deserved, and the promptness with which the efforts of Mr. Hargrove have been seconded promises much for the lower Mississippi valley as a cotton manufacturer.

Southern Farm Magazine.

One of the most original discussions ever printed of the advantages of industrial capital to agriculture, with special reference to the necessities of Southern farmers, appears in the May number of the Southern Farm Magazine of Baltimore. The article is by Mr. W. A. Parker, late editor of the Wesson (Miss.) Mirror. He treats his subject from the standpoint of broad philosophy, an intimate acquaintance with the conditions of Southern farmers and their attitude toward corporations, and in excellent spirit and in a style brightened by pungent epigrams and an original method of presenting solid facts. His article is but one of several in the magazine bearing upon the ills of farmers and their cure, notable among which are those by Mrs. Helen S. Thompson of Tennessee on the model country home, in which she advises farmers to encourage their children to remain on the farm by making the home attractive; one on book farming, by Mr. Samuel B. Woods of Charlottesville, Va., and, if the reader desires a hearty laugh, the initial number of a series of articles by Hon. A. B. Irion of Louisiana on the experiences of an amateur farmer, in which, in a most humorous vein, he sets forth the trials and tribulations attending the efforts of a greenhorn to make a living. The sketches are true to life, and will undoubtedly prove an interesting feature of the magazine during several months.

An account of the plans and operations of the farmers' institute in Tennessee, experiences in farming in Mississippi and Georgia, and a variety of other timely topics are also discussed.

The departments of the magazine show constant improvement. Under the head of Writers and Other Things are discussed in an original vein literary topics based upon recent publications. They include literary resurrectionism, suggested by the publication of the Browning love letters; the romance of Judah, dealing with the possibilities of the modern Jew in literature; the importance of writing history from the cosmopolitan standpoint rather than the provincial; megaphonous literature, a skit against the flooding of periodicals, with articles on the Spanish-American war and other subjects. Fresh From the Soil is a department devoted to genuine Southern humor, carefully culled from Southern publications. Original and selected material appears in the Family Circle and young folks' corner, and in the pages devoted to the Southern products, immigration and correspondence, while the editorial pages are representative of the movements for the best interests of Southern agriculture.

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SOUTHERN POWERS SHOWN.

The Opportunities There for Profitable Investments.

At the meeting last week at Southern Pines, designed to interest Northern investors in Southern development, Col. J. B. Killebrew of Nashville, Tenn., presented an interesting paper on the South as a field for the investment of capital. He said that the South should have the broadest advertisement, and that it should adopt the most efficient and powerful agencies to make itself felt in the great world of thought and action. The strongest argument employed hitherto, he said, against investing money in the South, and the argument that had had the greatest effect upon capitalists, is that "if the South is so wonderfully endowed, so rich in opportunities, if its resources and advantages are so varied, extensive and valuable, if its soils are so fertile and with such rare capacity for the diversification of crops, why is it that the whole region is not more thickly populated, why have these grand opportunities been so long neglected by the capitalists of the world?"

Colonel Killebrew answered these objections by allusions to the conditions which made the South a section in which the plantation system dominated agriculture, to the devastation of the war and reconstruction, and the helpless condition of the people, due to ignorance of facts elsewhere. He said: "Not until Cleveland's election did the Northern people look favorably upon the South. Then they began to come and spy out the land. They were amazed at the vast possibilities of the country and began to invest. A few of the large ironmaking establishments were begun and carried on successfully under the supervision of Northern men, but it is a fact that by far the largest number were built up with Southern capital and controlled by Southern people. The leaders among these were J. C. Warner, A. M. Shook, Tennie Hillman, Nat Baxter, Jr., Mr. De Bardeleben, Enoch Ensley, James Bowron and a few others, whose names are indelibly stamped upon the progress of the iron and coal development of the South. There is not now, nor has there ever been, a lack of executive ability among the Southern people."

He traced the development since 1888 of the coal and iron industry, of the phos-

phate industry of South Carolina, Florida and Tennessee, the textile industry and tobacco manufacturing. He said: "The South is the coming center of the world's industry. The clouds of prejudice and ignorance that have obscured its splendor are passing away. It combines a greater number of favorable conditions for human activity and human effort than any other country on the globe. There is no other country in which are produced five of the most powerful factors for stimulating industry, and which stand at the head of all others for furnishing by their manufacture the greatest number of people with the means of living. These factors are coal, iron, phosphate, cotton and tobacco. It would be difficult in any other country to find more than three of these."

In a broad manner the speaker pictured the opportunities of the South, dwelling in some detail upon those in the region traversed by the Nashville, Chattanooga & St. Louis Railway, and in conclusion said: "I have tried, gentlemen, to give you a truthful picture of the South. It is your country as well as mine. We are here together living under the same constitution and linked to the same destiny. Sink or swim, live or die, survive or perish, we go together. Your prosperity is our prosperity. Your adversity is our adversity. United we can bid defiance to the world either in arms or in industry."

"Nothing but a great and terrible convulsion of nature or the total destruction of all moral and civil government, or a rate of taxation so oppressive as to work a practical confiscation of property, or domestic dissensions so intense as to paralyze energy in industrial pursuits, can prevent the South from having a population at the end of the next decade as great as the whole United States had in 1880, and from making a corresponding advance in all her industries. New oceans and billows of thought are sweeping over our people which will bring about a realization of a 'new heaven and a new earth.' This happy region combines all the elements of health, physical enjoyment and prosperity. It is capable of building up and sustaining the very highest civilization."

"In the imperial glory and amenity of its climate, in the fertility and versatility of its soils, in the purity and sweetness of its atmosphere, in the beauty and clearness of its sky, in the grandeur and splendor of its mountain scenery, in the pastoral beauty and fruitfulness of its lower lands, in the majesty and usefulness of its rivers, in the brightness and swiftness and motive power of its smaller streams, in the supplies of food, coal, iron ores, timber, crops, and in the healthfulness of its situation—taking all these together, this region stands, in its capabilities and possibilities, without a peer in all the earth. These Southern States will become in time, with the advent of skilled labor and capital, what they deserve to be, the brightest constellation in the firmament of the American Union."

"The South welcomes you, gentlemen of the North, to your own. Your welcome is breathed by the winds, thundered in the waterfalls of its streams, written abroad in the softness and brightness of the sunlight and spoken in the inward sense and longing of its hospitable people."

Another speaker at the meeting, Mr. M. P. Walsh, managing editor of the Augusta Chronicle, reviewed the advantages of Augusta as a manufacturing and industrial center in illustration of the capabilities of Southern communities, and said:

"And yet the East has been blind to the open door at its very threshold. With fatuitous self-confidence New York and

other great financial and commercial centers have expected without further effort to continue in the enjoyment of the business that has enriched them in the past. They have allowed the great tides of immigration that have poured through Castle Garden to sweep past them into the almost limitless West instead of turning them South, where they would build up a section that is their natural ally. The last impression of these people as they journey to their new homes is of the magnificent cities of the West. The East is but a dream and the fruits of their toil go to enrich the newer trade centers. Their friends and relatives follow the beaten track. Gradually the stories of a greater land of promise have reached their ears, and thousands have turned to the South, bringing the South and West in closer touch at the expense of the East. There have been many factors at work in this movement. Every national political convention for many years has been held in the West. Every exposition since the Centennial at Philadelphia has been held in the West or South. In the past year thousands of soldiers from the West have been camped in the South. The result has been that the masses have mingled and exchanged ideas. The peoples of both sections are an agricultural people, and they have naturally affiliated. The East has felt the change in commerce and politics. The Western roads soon granted homeseekers rates to the South, and there have been active Southern agencies at work advertising the South in the West. As a result there are forty inquiries from the West where there is one from the East.

"I would do nothing that would discourage these friendly relations. On the contrary, the hope of the agricultural development of the South is in the West, but I will do all in my power to awaken the East to the unbounded wealth of the South that needs not the civilizing touch of the sabre and the rifle, or the fertilization of a nation's heroic blood."

Other speakers were E. J. Hale, Fayetteville, N. C.; W. S. Primrose, Raleigh; Governor Russell, North Carolina; Thos. J. Jarvis, Greenville, N. C.; C. J. Brown, Southern Pines; Will K. Jones, Columbus, N. C.; Fred H. Smith, Concord; D. C. Du Pre, Greenwood, S. C.; C. L. Stevens, New Bern, N. C.; Ira J. Carter, High Springs, Fla.; S. H. Hudgins, Saluda, N. C.; Mrs. D. E. Osborne, Greensboro, N. C.; Edward Brosston, Brunswick, Ga.; Geo. Groghan, Elberton, Ga.; President A. M. Clark, Board of Trade, Southern Pines; Major W. A. Graham, Lincolnton, N. C.; R. O. Pryor, Elizabeth City, N. C.; John W. Tullis, Eufaula, Ala.; George Allen, secretary and treasurer Raleigh Chamber of Commerce, and others.

Previous to this meeting the industrial agents of the Seaboard Air Line held a profitable session.

Another Furnace in Blast.

Rusk, Texas, April 21.

The Star and Crescent pig-iron furnace at this place, which has been idle for more than six years, has gone into blast, and will turn out fifty tons each day hereafter. Lignite will be the fuel used. The new plant of the Kavanaugh Foundry & Manufacturing Co. is being pushed with vigor. Interested persons are expected here shortly to inspect the holdings of the new Birmingham Land, Iron & Improvement Co. This section is being inspired with the gospel which the Manufacturers' Record has preached for many years, to wit, put the unexampled raw material of the South into finished articles at home.

The city of Columbus, Ga., cleared off last week its floating indebtedness.

IRON MASTERS CONSERVATIVE.

The Market at Birmingham Better in Every Respect.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., April 25.

The iron market the past week was better in every sense of the word. The feeling among the ironmasters is very conservative. The greater part of production for the year has been placed already, and if any advance of moment came it could affect but a small part of their output. Their interests, therefore, are diametrically opposed to any flurries in the market, and their influence would be altogether in favor of steady values on the basis now prevailing. But it don't look that way. For instance, take the Tennessee Company, a most potent factor in iron in this district. It has eleven furnaces in blast in this district, and its stock in furnace yards is scant 3000 tons. Divide this by eleven furnaces and you have an average of less than 300 tons per furnace. Of this 300 tons when tested for grade by the nine different grades by which iron is classified, what a small amount of any one grade any one furnace can furnish! It is simply nominal. So the buyer can see on what a slender thread his chances hang for getting an order of decent size filled, or, in fact, how difficult it will be to get any order filled in its entirety. Some of the other interests are in somewhat better fix, but, approximately speaking, all are in the same boat. It is plain as day that buyers as well as sellers will be compelled to resort to the hand-to-mouth policy.

While quotations are unchanged, values have been a little stiffer, and there have been sellers outside of furnace interests who are letting go. Gray forge is quoted at \$9.25 to \$9.75; No. 4 foundry forge, \$9.75 to \$10; No. 3 foundry, \$11.25 to \$11.50, and No. 2 foundry, \$11.75 to \$12.25. The soft grades are, for No. 1, \$12.50 to \$12.75, and No. 2 soft, \$11.75 to \$12.25. They are following very closely Nos. 1 and 2 foundry, respectively. It must be remembered that the extreme figures represent prices for small lots, and the range of prices covers not one day, but one week. The week preceding the Central West was a buyer here of basic iron. The past week they were in again, but this time they were after gray forge. Warrants, though not active, were sought for and sold more nearly in line with furnace askings than for some time past.

There is no iron going into warrant-yards. There is a continuous stream going out of them. In the past two weeks the warrant-yards here have been depleted fully 5000 tons. This is rather an under than an overestimate, and it continues to go out every day in small lots. It won't do to say that don't amount to anything—the quantities are small. Then, again, on April 1 the stock in warrant-yards in the United States was only 100,000 tons. One lot of 25,000 tons has been sold since then, and there are 20,000 to 25,000 tons in litigation that can't by any possibility come out in the immediate or near future. One can readily figure out the influence of warrant-yard stocks on the general market as mighty near nil.

The export trade was nominal. But little can be spared for new business, as every day it becomes more and more apparent that it will be difficult to supply regular home trade. One prominent in iron circles said to your correspondent: "England, after several years of great prosperity in the iron trade, increased her tonnage over 1897 100,000 tons, while we, after years of sad depression, increased ours 2,600,000 tons. While we ended the

year on a 12,000,000-ton basis, we practically commenced the present year on a 13,000,000-ton basis, and have advanced it now to approximately a 15,000,000-ton basis." There's meat in that. Another stack will probably be added to the Ensley furnace plant, as when the steel plant and rod mill begin operations it will take the output of four furnaces in constant operation to meet demands upon it.

In addition to the Talledega furnace, of which you have been advised, the one at Jenifer will be changed from a charcoal furnace to coke and put in operation. Perhaps in three or four months it will be in operation. They have commenced work upon it.

There have been some transactions in coal lands.

In real estate there has been some excitement, but it has cooled down a good deal. Things were wild for a few days and prices got beyond reason and practically stopped trading.

Shoestring speculators in real estate have been shut out by insistence on part of real estate men of a first payment that in size means genuine business. Several enterprises are on foot that deserve mention, but which we are forced to pass to a more convenient season. J. M. K.

Eastern Iron Markets.

[Special Cor. Manufacturers' Record.]
Philadelphia, Pa., April 26.

The iron trade remains undisturbed. The enormous production appears to be absorbed. Those who think they have approximately estimated the requirements of iron and steel for the latter half of the year think they see such a shortage in supply as will harden prices all around when the time comes to provide regularly for the balance of the year. There are several contingencies to be feared which may disarrange all calculations. So far we have escaped. The iron and steel workers meet next month to rearrange the scale, and they may want a different one. For ten years circumstances have been against them. The ore miners have concluded to not make trouble. The transporting interests are getting things into shape. Blast-furnace labor is contented.

Pig iron is selling slowly. All consumers, however, are keeping a sharp eye on the market. The time is approaching when large contracts will be made for all kinds. Quotations are well known, and buyers understand the position of makers as to accepting orders now for autumn delivery. In about a month the situation will clear up enough to enable consumers to act intelligently.

Billets also will soon be wanted in a large way. Prices rule high and firm. Stocks are low in nearly all yards. Manufacturers decline to quote prices at present. The mill price, \$25 to \$26, has the appearance of permanency.

The bar-iron situation is not changed in any respect, except that car builders have succeeded in making it more difficult for the general trade to get accommodated. Prices are 1.40 to 1.50 for common, 1.50 to 1.60 for refined and 1.75 for steel bars.

The sheet-iron manufacturers are making better margins than ever on the work they are now doing. They have contracts for raw material placed far ahead. So that they are in a position to profit by any advances that may be made.

Pipe and tube work is very good, and prices are all that could be desired.

Merchant-steel makers are quoting on large requirements for delivery after July 1.

The plate mills are very busy. Contracts have been placed here for two large ocean steamers for the Hamburg-Ameri-

can Line. Boiler plate sells at 2.30 to 2.50, and all other kinds in proportion. The small buyers are urging their claims every day, and on such business, involving more changes of rolls, the highest prices are asked. The shipbuilders have considerable business to place, but they are not placing it, as they do not regard present market conditions as lasting. The demand for high grades of locomotive fire-box are quite an important feature. Boiler shops and engine plants are rushed with work.

The manufacturers of structural iron have been asked in a general way by bridge builders and three or four consulting engineers concerning their ability to fill orders between August and October. The latter part of the year will be a period of exceptional activity in the structural-iron department. Quotations range from 1.60 to 1.90 for all kinds of shapes.

The pressure of railroad men for steel rails is beginning to be felt. A great deal of track relaying is now started. The mills are pretty well loaded up, and there is enough work in sight to keep mills busy. Quotations are \$26 to \$28.

Old rails have been crowded up to \$19, and may go still higher, because of the exhaustion of supplies and the great need for scrapping purposes.

Scrap of all kinds is high, and there is far from a sufficient supply. Business is active, and dealers are looking everywhere to accommodate their customers.

Jackson Reaching Out.

[Special Cor. Manufacturers' Record.]
Jackson, Miss., April 21.

The recent organization of the Young Men's Business League of this city, of which Mr. Jarrard Harris is president, is making a strong effort to advance the interests of the town and to get into correspondence with people who wish to establish industries there. Mr. E. E. Frantz, secretary, has issued a circular suggesting that there are advantages in Jackson for machine shops, box, crate and basket factory, a mill for the manufacture of cotton bagging, yarns and fabrics, a furniture factory, a saw and planing mill for working hardwood lumber, an agricultural-implement and axle factory, tiling and pottery works, a cigar and tobacco factory, stock-yards and a canning factory. Jackson, the capital of Mississippi, is in the center of the hill region of the State, on Pearl river, a navigable stream. Its population is 15,000. Six railroads center here and two more are building from Gulf ports. An extensive railway system is under construction, and bonds have been issued for the construction of a sewerage system. The city has a fair school system, two colleges, nine churches, electric-light and water works, and an automatic fire-alarm system. It is high, dry and healthy. The Young Men's Business League announces that concessions will be made to secure factories.

Hardware Store Business Methods.
Compiled and edited by R. R. Williams, hardware editor of the Iron Age. Publisher, David Williams Co., New York. Price \$1.

This volume is a compilation of articles of a practical nature, which have already appeared in the Iron Age. They were written by progressive hardware merchants, drawing upon their own experiences for material, and persons engaged in the hardware trade will find in the collection, in a thorough and practical treatment of the important subjects discussed, many valuable suggestions for their business, while men in other lines of trade may glean from it much useful information and advice.

TWO ROUND BALES COMPARED.

Economies of the Cylindrical Compressors Described.

[New York Sun.]

When that veteran money-maker, John E. Searles, retired as an officer of the American Sugar Refining Co. and became president of the American Cotton Co., whose business is the pushing into use of one of the new forms of cotton bales, there could be no doubt in any shrewd person's mind that there were chances of "millions in it." At the present time the whole cotton belt of the United States is intensely stirred up over the warfare between the square-bale and round-bale advocates, and if the round-bale men can win out over the conservatism, prejudice and invested interests of the square-bale men there are probably millions enough in sight for them to satisfy the avaricious.

In the cotton district and among cotton factors, brokers and mill men the arguments of the round-bale and square-bale men are well known, for the warfare has been going on for two or three years, but outside of those directly interested little or nothing is known of it. Yet it is a matter of such importance, in a country where cotton is one of the great staples of production, that it directly concerns every citizen.

The standard cotton bale of the world—the square bale—is today just what it has been for generations. From the day when Whitney invented the cotton gin and thus made cotton a profitable crop to raise in the South, the fluffy product of the boll, relieved of its seeds, has been put up in the one kind of package for transportation. During this long time there have been improvements made in cotton presses, in compresses, in ties and bagging, but the making of the bale remains the same. From the gins the lint is carried to a big square box with a plunger in it, where it is squeezed down into a square form, and this is covered with a jute casing and the bale held in shape with half a dozen iron ties.

These bales are perhaps six feet long and four feet tall, and each one weighs 500 pounds. These are the bales with which almost everyone is familiar. In this form, however, it is altogether too bulky to be shipped profitably to Europe or for very long railroad hauls, and so at such shipping places there have been established secondary presses, called compresses, which take the plantation bale and squeeze it down to one-third its cubic dimensions and to a corresponding degree of density. These bales are then forced into the holds of ships by jackscrews to get as many as possible into the space. If these bales were always produced of the same dimensions there would perhaps be less argument in favor of a new bale, upon the special ground of shipping convenience, but this is not the case. They frequently vary nearly a foot in height and a full foot in length, and it is not uncommon for stevedores to cut off the extra length to make the bale stow snugly. The cotton thus cut off is more or less damaged. This, however, is but a small part of the disadvantage of the old bale, and the need of some better way to handle cotton has been recognized by experts for years.

A. B. Shepperson, the statistician of the Cotton Exchange, says in his "Cotton Facts:"

"The old style of American cotton bale is put up in such an unscientific manner as to make its transportation, its storage, its marine and fire insurance dearer for the same weight and value of cotton than any other cotton of commerce. From the defective methods of baling there is a greater loss in weight in transportation

and from theft, greater damage by wet, dirt, dust, fire, etc., and greater loss to the mills from the practically useless bagging and ties and the freight on them than on any other kind of cotton. The bagging on a bale weighs twelve to fourteen pounds, and the ties about ten pounds, so that on every bale of cotton transportation has to be paid on about twenty-three pounds of useless bagging and ties.

"It is the universal custom to have the planters' square bales compressed by powerful compressors before shipment by ocean steamers or to any considerable distance by railroad. The cost of compressing is about fifty cents a bale. But this is not all, for the clipping of the ties in order to shorten them, the removal of the side pieces of the bagging, which are no longer needed for the smaller bale, and the loss of cotton in handling at the compress, causes a loss in weight at the compress averaging four pounds a bale. At six cents a pound this would add twenty-four cents to the previous charges. To this would usually have to be added twenty-five cents a bale to cover storage until the cotton is ready for shipment and drayage to and from the compress."

Here at one stage alone of the moving of the cotton crop to the great world's markets is a tax of about \$1 a bale, which it is declared is entirely done away with by the newer processes, and this one item on a crop of 10,000,000 to 12,000,000 bales each year has in it enough to attract the attention of both the inventor and the money-maker. But there are enough other ways for saving, it is authoritatively declared, that make it possible that at least \$3 can be saved in the marketing of every bale. This gives from \$30,000,000 to \$36,000,000 a year, which a successful new system will make it possible to divide between the inventor, the cotton-raiser and those who handle the cotton on its way to the mills.

This thirty-odd millions of dollars a year is the incentive which has stirred up the inventor and the money-maker to the introduction of a new and better system, and today there are two companies in the field, each with a baling system which they declare to be far ahead of the old one and each declared by its advocates to be superior to the other.

Independent critics uphold the claims of both for superiority over the old system, and declare that each of the new systems has points of advantage common to both and differences which are so marked that they do not compare, but must each be considered superior to the other upon these special points. They are alike only that by both round bales of a high degree of density are produced right at the cotton gin with an initial saving which runs right through the whole after-process of shipment and transportation and even into the mills where the cotton is broken out of the bales.

The older of these processes and the one which is most advanced in use is that of the American Cotton Co. The foundation of this system was laid by a man named Bessonette. The peculiarity of the bale is that it is made of a compressed lap or batting of the cotton, rolled up into a solid cylindrical form, just as one would roll up a carpet or a long strip of paper. In this form each layer forms a binding for the layers beneath it, and the bale, no matter how densely the cotton is compressed, stays in form without any binding or ties, and merely requires bagging to be ready for shipment. The other new bale is also cylindrical in form, and is produced by what is called the Lowry process, which differs as much in the methods and machines used from that of the American Cotton Co. as do the bales in their construction and qualities. The

Lowry bale is built up from end to end of layers of cotton, put in spirally, and it has a small hole left in the center of the bale like that in a thread cotton spool. Although this bale will stay in shape for a time after it leaves the machine, it has to be bound endwise to keep it from gradually expanding in that direction. These ties, however, are only of wire and three in number. They are put through the bale at the center and embrace the cotton in this way from the center outwardly at three different places. * * *

The general advantages of both are the same. These begin right at the ginning mill, where a saving in bagging and ties is made of from two-thirds to three-quarters of the regular sum, which averages seventy-five cents for the old-style bale. Compressed to a density of thirty-five to forty-five pounds to a cubic foot, as against only twenty-two and one-half pounds, the standard density of the old bale, it is as solid as wood and is practically waterproof and fireproof. Insurance charges are lowered, while the much larger amount which can be loaded into a car, vessel or warehouse insures the securing of lower charges for freight or storage. There is no waste in transportation from loose cotton, no second compressing to do, if the cotton is for the foreign market, no need for screws to get it solidly into the ship's hold, and, again, the cost of marine insurance is reduced.

At the cotton mills a saving is made of the cost of what is called breaking out, which is considerable. The new bales either unroll or break out without trouble. A new bale of the unrolling type is being made which is thirty-six inches long and twenty-two inches in diameter and weighs about 260 pounds, which the cotton-cloth manufacturer can put right upon the apron of his lapping machine, where it unrolls ready to begin its progress into the carding and spinning machines without an intermediate process. It is declared by mill experts that any desirable mixtures of cotton can be made at once at this stage of the operation by simply placing two or more bales of cotton on the lapper at the same time and unrolling them together.

With all of these advantages it seems remarkable at first thought that the new bale should not have displaced the old one with a rush or that it should have met with any serious opposition, but this has not been true, and the war against it is bitter. This is accounted for by non-partisan observers largely because of the intimately interwoven financial interests which have naturally sprung up among all who were associated under the old system in the handling of cotton from the field to the workshop. There are the ginners, the pressers, the cotton factors, the brokers, the buyers and the transportation men. They were not only personally friendly to one another through long business association, but were often connected by mutual investments in gins, presses, warehouses, compresses and credit connections, and even in ships, railroads or mills. If one of these, broke from his old associates he was likely to suffer one way or another.

This difficulty has led the American Cotton Co. into an undertaking which, entirely apart from the new process of baling, seems destined to cause a revolution in the cotton trade. It has constituted itself a great cotton factor, and wherever it is desired enters into an agreement with the persons using its baling machinery to buy all the cotton baled by the machines at a price which will repay the rental of the machines. In connection with this it has instituted a sampling system, which is the real key to the impending revolution. Under the prevailing system there is no established method of

determining for once and all what the comparative quality of a cotton bale's contents is and then passing it on into the world's markets, definitely sampled. In other great staples this was accomplished long ago, as with grain, which, once it reaches a recognized elevator, is graded by accepted experts, dumped into its appropriate bin and thenceforth loses its identity and goes forth simply as so much No. 1, No. 2 or No. 3 grain of a specified kind.

With cotton this is all different. Each bale is sampled at the ginnery, sampled again at the shipping place, again at the storehouse or compress, and so on every time it changes hands, until it is not uncommon for a bale to be sampled five or six times before it finally reaches the mill. Each time an expert must be employed to do the sampling, men to overhaul and handle the bales and a considerable lot of cotton is drawn out and taken to the sample rooms or wasted. The cost of this, besides the loss of cotton, is estimated at from ten to fifteen cents for each sampling.

The American Cotton Co. recommends to each of the lessees of its machines that two proper samples be drawn from each bale; that these and the bale be properly marked for identification, and that thenceforth the bale be forwarded from hand to hand with a guarantee that the cotton in it will be found like the samples. Both companies making the new baling machines lease them instead of selling them and charge is based upon the old cost of baling cotton and is twenty cents for each hundred pounds put up.

The methods by which the two round bales now being made are produced are interesting.

In the baling machines of the American Cotton Co. the lint cotton as it comes from the gin is sent flying up a big pipe, where it encounters first a perforated wheel revolving rapidly under a dust chimney. The lighter dirt in the cotton is blown out of this chimney, while that which is heavier falls through the wheel into a dust pan suspended inside. The wheel presently throws the lint off by centrifugal action and it falls into a V-shaped opening whose sides are formed of belts revolving over rollers. These belts lead it to the lower rollers, which set quite close together and draw the cotton out into a bat of even thickness and of the width of the opening. This width determines the length of the bale. There are two sizes of machines, one making a 48-inch bale and the other a 36-inch bale.

The bat now passes between two rollers which are held together by heavy springs, and here all the air is pressed out of the cotton, rendering the previously thick and fluffy bat a close feltlike ribbon. It is one of the recent improvements in the system that this pressure is not produced by two hard metallic faces, but that a rubber band runs over the lower roller between its face and the cotton. This band now leads down to the horizontal center of the wheel, where it turns upward again around a spindle on which the bale is to be rolled. Another roller sits opposite, with its center in line with the center of the first and also with the spindle, and this is pressed toward the first roller by a hydraulic pump, pinching the forming bale between the two. The rubber band passes up over the second roller and then down to a movable tightening roller below.

As the end of the bat of cotton reaches the spindle it begins to wind about it and each fold is pressed close to the last by the opposite roller. In the early days of this bale it was found that the centers were finally so compressed by the increasing tension of the outer wrappers that the bale would not entirely unwind. This is obviated now by giving a lighter pressure

at first, and the cotton is allowed to soften up at the center even more by removing the spindle after the bale is formed. When the bale is rolled to the required size it is taken out, covered, weighed and marked. The machines are built double, so that the bat may run continually.

In the making of the Lowry bale an entirely different machine is used. It might best be described as a cotton sausage maker, and is not unlike a modern household meat cutter. It consists of an iron cylinder of the diameter of the bale to be produced, and in the top plate are a number of holes radiating about the center. Just under these holes is a revolving plate turned by power. That is the whole machine. The lint, after being cleaned by any suitable device, is let fall upon the top of the cylinder. The cotton falls through the holes and the revolving plate catches it and draws it in, pressing the air out of it as the cotton passes. As the space fills up the incoming cotton forces out that which is compressed, and this, in turn, first fills the cylinder below the turning plate in spiral layers and then presses forward into canvas bags suspended below. As each bag is filled the cotton is cut off, a new bag fitted on, and so the operation goes on endlessly like a sausage-filling machine. There is an automatic arrangement for placing the wires in the bales, and these have to be fastened before the bag is finally sampled, sewed up, weighed and marked.

A SOUTHERN DEVELOPER.

Mr. John Skelton Williams' Success as a Railroad Financier.

I was talking a few days ago with D. A. Tompkins of Charlotte touching the recent brilliant railroad performances of young Mr. John Skelton Williams of Richmond. Mr. Tompkins is one of the most thoroughly-posted men in matters pertaining to the industrial development of the South.

"I have no doubt," said Mr. Tompkins, "that the extension of the Seaboard system, as it is being accomplished by Mr. Williams, will be of great advantage to the South. It will increase the tendency for development on each of the lines that were formerly separate lines, but will now become one new and large system. It will naturally give better facilities both of passenger and freight service to a large number of people who heretofore have not been on any through line of comprehensive railroad system. For some years past the Seaboard system has been fortunate in falling into strong hands. Mr. Hoffman was a man of great ability. When Mr. St. John came to the system he greatly increased the strength of the Seaboard management. Now that Mr. Hoffman is disposed partially to retire, Mr. John Skelton Williams will come to the head of the system. Mr. Williams is yet a young man, and is known to be one of great talent, having a large reserve strength for work. The increased mileage that Mr. Williams has brought to the system and the increased value that his youth brings to the management will without doubt not only benefit the road, but the entire section of the country through which the various parts of the system go.

"It has been said," continued Mr. Tompkins, "that this new combination will have a bad effect upon the Southern Railway. I do not think so. It will not injure it in the slightest degree. The South is growing very rapidly; new manufacturing plants are being built with astonishing frequency, farming interests have developed on better lines and there is really need for more transportation facilities. This enlarged service of the

Seaboard simply meets the requirements of the development of the country. It takes nothing from the Southern. The greater part of the two systems are not competitive, but each system is developing certain sections of the country, not much touched by the other. There are several crossing points and common terminals, of course, but in the main each system has ample territory, the development of which will keep it busy. With increasing manufactures and a tendency of the farming element to come to the South, both systems will undoubtedly have an opportunity to grow."

This young John Skelton Williams is scarce turned thirty-five. Some folks think he happened suddenly. But men who do big things nowadays do not happen this way. While financiers, especially railroad men, are marveling at the splendor of this young man's recent performance, the wealthy old codgers in Richmond who have known him since he was a lad grunt and say: "Not at all surprised; always knew the boy had it in him." In the last fifteen years John Skelton Williams has put in about seven and one-half years of extra work while the rest of the world was asleep. He is a late worker now. He never stops working. He is as intent upon his problems as Edison is upon his. He is so busy he wouldn't have time for self-commendation, even if he wanted to. He doesn't seem to be conscious of what he has done. He has in his own mind only come to his goal by degrees, and that is all. His father has been a banker for years in Richmond. He had, above other things, integrity, accuracy and broad-gauged foresight, based upon a scholarship. The boy went to work early, and he absorbed everything his father had to impart to him. His greatest powers today lie in the confidence with which men of money regard his word and his judgment. He is head of the shortest line from Washington to Tampa, and the system over which he has control takes up the substance of the country it touches like a sponge. Many men had been foiled in buying for certain interests the Seaboard Air Line. John Skelton Williams bought it. Nine hundred more miles remained to be added in the Florida Central & Peninsular, making 2300 miles in all. Only within a recent date Mr. Williams was at the head of a line of road running from Savannah, Ga., to Montgomery, Ala. This road is known as the Georgia & Alabama Railroad, which is the reorganization of the old Savannah, Americus & Montgomery road. The Florida Central & Peninsular system reached from Columbia, S. C., to Tampa, Fla., going through Savannah and Jacksonville, besides having various branches in Florida. I am told that a line is to be built very soon from Hamlet to Columbia, which will be almost the hypothenuse of a right-angled triangle. The line now building from Petersburg to Ridgeway will save thirty miles between Atlanta and Washington, and the rumor is that the Baltimore & Ohio, in co-operation with the Seaboard, will build a line between Washington and Quantico. If one will study the map, and is interested in the South, the accomplishment of these things will weigh tons.

I do not believe the people of North Carolina have yet realized what is already at their doors. It comes, too, at a time when the liquidation from the last panic has about been completed. It comes at the beginning of what will probably be the three years of greatest industrial activity this country has ever known. Even one year ago money would not have been turned loose for the launching of so colossal a scheme. The time is ripe now,

and when men of money looked about for a ripe man they found him in John Skelton Williams. He has been twenty years mastering finance as a science. His railroad and security figures are standard in the great banking houses of Great Britain and the Continent. He is so modest that one might pass him for a clerk in his own office. Yet his head is grinding up ideas all the time. His recent interview in the Manufacturers' Record showed that he could say big, broad things easily with a result of reserve power left upon the reader. To North Carolinians, who love the Seaboard as a product of their sweat and blood, this statement from Mr. Williams will come with special gratefulness: "Our policy is to maintain the Seaboard as an absolutely independent line, and there need be no fear as to its absorption by any other system. It will be abundantly able to take care of itself and to play a leading part in every good work for the advancement of the South, and we hope not only to retain all the friendly interest given to its former management, but to still further strengthen its hold upon the good-will of the people." Upon the rock of the "people" in North Carolina has the management of the Seaboard system rested ever since Mr. St. John became vice-president and general manager. If there have been political upheavals in the State, the programme of Mr. St. John has been a distinctly business one in contradistinction to a political one. His training has taught him that pulling cars on the tracks beats pulling legs in conventions. Thus it will also be gratifying to know that Mr. St. John will be at the right hand of Mr. Williams, with a corps of men technically, not theoretically, trained to the railroad work. If Mr. Williams perceive the scope, Mr. St. John will coincide with the outlines in full training and force and sympathy. Nearly all the old force remain in the operative department. Mr. L. S. Allen, the new general passenger agent, has made many friends even since his recent arrival from a life-long training in railroading. He is a young man, and as strong as he is popular.

Railroads know that the South is the cow that is going to give the most cream in its future development toward the colossal empire of this country's raw material. Moreover, the railroads know the operative is going to get closer to the raw material in the next ten years. The next ten years, therefore, will witness an era of town-building in the South that was never seen before. Thus immigration has come in the wake of the broad policy of Mr. St. John. With its enlarged power of usefulness the Seaboard comes to North Carolina and the South rather as a part of its fabric than as a money-making stranger passing adroitly through its gates and out again.—W. E. Christian, in Raleigh News and Observer.

Stevens' Mechanical Catechism. By H. G. Stevens. Publishers, Laird & Lee, Chicago. Price (silk cloth) \$1; leather, \$1.50.

Like all the reference books published by Laird & Lee, this handy volume is full of practical information tersely expressed, covering subjects of interest to stationary and marine engineers, firemen, electricians, motormen, ice-machine men and mechanics in general. The language is the language of mechanics, and the arrangement is adapted to their difficulties and their need, intricate problems and purely theoretical questions being omitted. Most of the subjects are treated in the form of questions and answers. A classified alphabetical index guides the reader instantly to any subject, while more than 240 sectional cuts and illustrations are additional aids.

COMMERCE.

This department is devoted to a record of the rapidly developing commerce of Southern ports.

HINTS FROM CONSULS.

Suggestions Regarding Opportunities for Enlarging American Trade.

United States Consul George P. Pettit, at Dusseldorf, discussing the controversies between American manufacturers of machinery and tools and their German customers, due to the damage of goods in transit, delays in shipments and vague contracts, writes advising that all machines and parts of machines should be boxed when possible and the cast frames bolted securely to heavy timbers; that contracts should be made in writing when practicable, with no occasion as to where the responsibility of the American exporter ends and that of the German importer begins. He adds:

"Dusseldorf, being the financial center and largest city of the great iron and coal district of the German Empire, has become the leading place in the country for the sale of American machines and machine tools, and a number of firms employing large capital are engaged exclusively in the importation of these goods. Some of these firms—in fact, nearly all of them—remove the plates showing the names of the American manufacturers and replace them with plates bearing their own names as the makers. To avoid all of these difficulties and save the profit of the German middleman, a number of American manufacturing firms have opened permanent offices in this city with American engineers in charge, where plans and specifications are prepared, estimates made and contracts entered into. This system is very much more satisfactory to both the manufacturer and the German firms which buy the machines for use. There can be no doubt that many other American machine-tool manufacturers could profitably increase their business by opening offices here, with competent engineers and solicitors."

Adolph L. Frankenthal, at Berne, believes that fifty cents per ton in favor of Germany and Belgium is all that prevents the United States from acquiring and controlling the coal and coke trade of Germany and Switzerland. The center for the distribution of coal and coke for Germany and Switzerland is Mannheim, on the Rhine. Mr. Frankenthal suggests that a distributing depot for the products of American mines should be established across the river from Strassburg at Kehl, in the Duchy of Baden, which is connected with the German network of railroads, and also with the railroads of France and Switzerland. Rents are low, wharf facilities are cheap and Switzerland could be served better and cheaper than from Mannheim.

Mr. Frankenthal also believes that the United States can carry all the trade of Switzerland in building iron, and with little exertion the American companies manufacturing railroad rolling stock, such as car wheels and axles, could get a foothold there if they comply with the demands of the railways.

Consul-General Stowe, at Cape Town, South Africa, writes that the Pittsburg Iron Co. has received an order for the supply of iron piping for Johannesburg, South African Republic, which, it is estimated, will amount to \$1,000,000; but as it was secured through a London house the iron will not appear in the imports to South Africa from the United States. This is only one of the items for which

South Africa does not get credit as an importer from America.

Samuel S. Lyon, at Osaka, Japan, writes that the American market having been given the preference in the purchase of electrical machinery on account of frequent delays in the execution of orders by European firms, its superiority has been fully established in Japan. He also writes that tanning being looked upon in Japan as a degraded calling, it is not probable that the industry will materially improve there in the near future; and it is for that reason, together with the additional ones that cattle are scarce in that country, and that there is a growing demand in Japan for leather of all kinds, that the United States has a field in which it may largely increase its exportation of this article year by year.

Consul Wilcox, at Hankau, writes that the best plan for developing American trade in China is to establish in four or five of the leading commercial cities of that empire expositions in charge of experienced business men who know the ways and language of the country.

Minister Straus, at Constantinople, writes regarding the opportunities for trade in the Ottoman empire, that he believes that if enterprising American houses would study that market and establish agencies under American representatives they would in the course of a short time do a profitable and in many products and articles of manufacture a large business.

Competition of Gulf Ports.

The increase in business over the Northern & Southern Railway lines which reach Gulf ports continues to be very seriously regarded by the group of trunk lines terminating on the Atlantic coast. The east and west lines to Atlantic ports have made great reductions in tariffs on grain, upon the hypothesis that unless these are made the Gulf ports will capture the business.

In referring to the Gulf competition and the terminal facilities afforded such railroads as the Illinois Central, for example, President McBride of the Duluth, Missabe & Northern Railroad, who recently completed a Southern trip, says: "There is not a city in the Union, with the exception of New York, that has the possibilities of New Orleans. Railroads must be depended upon for these possibilities, hence the city must be a friend to railroads. The time should speedily draw to hand when such roads as the Illinois Central, draining as it does the most fertile valley in the world, should secure at the hands of the people of New Orleans every inducement. That road has at work between here and Memphis as many as fifty work trains, lowering grades, supplanting bridges and trestling, etc., with dirt work, ballasting the road and placing it in first-class condition. When all these improvements have been completed that road will be able to bring traffic into New Orleans at a much lower rate than any of the trunk lines have ever been able to do into New York."

Waterways in Mississippi Valley.

The work of improving waterways in the Mississippi valley through appropriations allowed by Congress will begin in a few weeks. One of the most important features of this work is the survey at the mouth of the Mississippi with the view of securing a ship channel which will be thirty-five feet deep at low water. A board of engineers is now engaged working upon it. It is intended to form a navigable channel in the Arkansas river between Little Rock and Pine Bluff, in Arkansas, and to make the river navigable for a distance of 733 miles from its

mouth. It is calculated to construct a dam across the White river at Batesville, Ark., which will cost \$150,000. This will greatly increase the depth of water on the upper portion of this stream. It is also calculated to deepen the vessel channels in the Osage and Gasconade rivers, while improvements will be made in the Current river which will allow light-draft boats to reach what is known as Little Current river, a branch stream. These improvements are entirely apart from the general work to be done along the Mississippi itself, for which a large appropriation has been made.

Newport News Terminals.

The new coal pier to be constructed at Newport News, Va., in connection with the Chesapeake & Ohio terminals, will be utilized for supplying bunker coal to steamships. This business has assumed such proportions that the Chesapeake & Ohio Company believes more facilities should be given for carrying it. The pier will be large enough to coal four vessels at one time, two ships being placed on each side. In addition to the elevator a new warehouse is to be built on pier No. 3.

The imports of fruits at Newport News have become a very important item in the commerce of the city. Within three weeks nearly 100,000 bunches of bananas have been received.

A Novel Craft.

The schooner Olga has been secured for the transportation business on the Gulf coast between Galveston, Brownsville and Port Arthur, Texas. The Olga may be called a steam schooner. In addition to her sail power she contains two gasoline engines, each of twenty horse-power, which are connected to separate screws. Her design is somewhat of a novelty in marine architecture, and it is claimed that she can make very fast time when loaded.

Mallory Line Wharves.

Plans have been prepared for the enlargement of the wharves of the Mallory Line of steamships at Galveston, Texas. The new wharves to be built will be nearly 1000 feet long, with a width of 150 and 172 feet, respectively. The additional terminals will greatly increase the facilities of the company at this port.

Jottings at the Ports.

The United States Shipping Co. may possibly begin a service between Newport News and the principal ports of Cuba, transporting passengers as well as freight.

The United Fruit Co., it is announced, has secured control of the Machea and Oteri lines of steamships, which run between New Orleans and Central America carrying tropical fruit. They will become a member of the fruit trust.

A company has been chartered to operate a line of boats on the Ohio river and West Virginia waters under the title of the Big Kanawha Towboat Co. Its capital is \$100,000, and the directors include R. B. Cassidy of Charleston, W. Va., and J. S. Johnson of Procterville, Ohio.

The Virginia & West Indian Fruit Trading Co. is a new corporation which proposes importing fruit from Central America to Newport News, where it will be distributed to the internal market by way of the Chesapeake & Ohio system. One vessel has already arrived and is expected to maintain a passenger as well as freight business.

The output in the Joplin (Mo.) district in the week ended April 22 amounted to 10,325,950 pounds of zinc and 817,340 pounds of lead, in all valued at \$265,136.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Third-Rail Electric System.

What is known as the third-rail electric system has recently attracted considerable interest by an exhibition given at Manhattan Beach on Coney Island. The system referred to is that of J. M. Murphy, who is the engineer of the Safety Third-Rail Electric Co. of New York, which is backing the invention. A number of tests have been made at different times, which resulted satisfactorily, but the most thorough of all was that at Manhattan Beach. A track several hundred feet long was laid, upon which was operated a motor car of the ordinary size. Current was secured from a power station nearby and carried beneath the track by an insulated wire. This is termed the main feed wire. At frequent intervals it is connected with the third rail, which is divided into sections by means of a patent switch. One of the principal features of the invention is that only the portion of the rails can be charged with electricity that the car passes over, the current being cut off as soon as it is clear of the section. In the ordinary trolley service a car requires two electrical conductors, one to carry the current from the station to the car and the other to return it. In the Murphy system, however, the third rail is the direct source of supply to the car, receiving its current from the feed wire already referred to. The mechanism by which the current is cut off from the rails after the car has passed over, acts upon an automatic principle and is considered by experts to be one of the most practical ideas which has yet been originated.

By the system employed the motor car is entirely under the control of the motor-man. The car receives the current by what is known as the "sliding-contact" process. In other tests of the system the track has been covered with mud and sand, but no difficulty has been experienced in keeping up the current and in operating the car. The test at Manhattan Beach was witnessed by some of the most prominent railroad officials in the country, as well as representatives of a number of foreign governments. The officers of the promoting company are Emerson McMillan, president; William M. Keepers, vice-president; David L. Halsted, secretary; C. T. Scoville, treasurer, and J. M. Murphy, chief engineer.

Earning Power of the Southern.

The Daily Stockholder of New York, commenting upon the recent reports made by the Southern Railway, says:

"The earning power of the Southern Railway continues to develop very satisfactorily. The low price of cotton may be a barrier to such expansion as would otherwise be shown, but the stimulus which has come to the iron trade and the generally improved industrial and commercial conditions have more than offset any losses which could possibly be traced to that cause, and the result is seen in gains of more than 11 per cent. This, too, it should be remembered, follows earnings already increased quite heavily, the figures a year ago showing up fully 7 per cent. higher than for 1897.

"For the nine months ending March 31 the road reported gross earnings of \$17,136,557, an increase of \$1,923,114, and has since shown gains of \$40,205 for the first week of April, and \$45,751 for the second week, so that the total so far this fiscal year is more than \$2,000,000 larger than for the like period of 1897-98, equiv-

alent to an increase of 11.2 per cent. Net earnings reported for eight months are \$675,534 better than a year ago, a gain of 15.5 per cent. They show for the preferred stock a trifle over 3 per cent. after deducting all charges."

Tifton to Thomasville.

The Tifton, Thomasville & Gulf Railway Co. is preparing to begin work immediately upon its line between Tifton and Thomasville, Ga., a distance of fifteen miles, and offices have already been established at Tifton. This company was organized largely in the interest of the Union Lumber Co., which has secured 75,000 acres of timber land in Colquitt county, Georgia. The railroad company has recently secured a decree in the court which allows it to build over a right of way partly graded by the Macon Construction Co. several years ago.

The principal parties behind the enterprise are John W. Hightower of Hawkinsville, vice-president, and W. A. Heath of Atlanta, general manager. With them are associated H. M. Atkinson of Atlanta, president, and N. E. Harris of Macon, J. H. Merrill, S. M. Hayes and E. M. Smith of Thomasville, W. W. Ashburn of Atlanta and Z. H. Clark of Moultrie.

Baltimore Capital Invested.

It is announced that arrangements have been practically completed for the consolidation of the street-railway systems of Atlanta, Ga. Baltimore capitalists have become interested in them and will finance the project. According to the plan reported, \$5,000,000 worth of 5 per cent. bonds will be issued in place of the present securities, of which \$750,000 will be reserved for improvements, also the construction of an electric-light plant.

A dispatch from Lexington, Ky., announces that a Baltimore syndicate is negotiating for the control of the street-railway system in that city. It is thirteen miles long and operated by the trolley system. The company is capitalized at \$1,000,000, and has a bonded debt of \$138,000. Lexington has a population of about 35,000, and it is understood there are opportunities for extending the lines in the suburbs.

The Heaviest Freight Train.

According to a report of Superintendent Fitzgerald of the Baltimore & Ohio Railroad, the heaviest train ever hauled by one engine on this system was recently taken from Cumberland to Brunswick, Md. Fifty steel cars, each weighing 34,000 pounds, were loaded with an average of 98,000 pounds of coal. To them was coupled a new 22x28-inch consolidation locomotive weighing 168,700 pounds and having 54-inch driving wheels. The train was pulled with comparative ease. Hitherto the trainload on that division has been about 2200 tons, a 40 per cent. increase over that of five years ago. The 50-car train was computed as 3229 tons gross. The net weight of coal in the train was 2379 tons.

A Prosperous Company.

In a letter to the Manufacturers' Record Mr. Seth F. Barnes, president of the St. Louis & Memphis Railway Co., writes that the company has determined to extend its line from its present terminus, Portageville, Mo., to a connection with the St. Louis, Kennett & Southern Railway. The St. Louis & Memphis is now in operation a distance of fourteen miles, and is owned by two families. The capital stock is \$130,000, and its only indebtedness is a bond issue of \$70,000. According to President Barnes, it far

more than pays its operating expenses, has no floating indebtedness whatever and has accumulated a surplus in its treasury.

Union Station at Memphis.

There is a strong possibility that a union passenger depot may be built in the near future at Memphis, Tenn., which will be utilized by the Illinois Central, the Louisville & Nashville and other railroads entering that city. A conference of railroad officials was recently held in Memphis, at which it is understood the matter was brought up and thoroughly discussed. It is probable that the Illinois Central will build the depot and charge a rental to the other companies using it.

Libraries for the People.

The Seaboard Air Line, which has inaugurated a series of libraries for the benefit of the people along its system, has recently received a check for \$1000 from Andrew Carnegie in appreciation of its efforts. The check was received in response to a letter from Mr. E. St. John, general manager of the Seaboard Air Line, who outlined the library plan being followed by the railroad company.

Railroad Notes.

C. H. Bosley has been appointed district passenger agent of the Norfolk & Western Railroad, with offices at Richmond, Va.

W. G. Davis has been appointed commercial agent of the Georgia Southern & Florida Railway Co., with headquarters at Atlanta.

According to a dispatch from Norfolk, Va., the Seaboard Air Line is preparing to secure twenty new passenger cars and 1000 new freight cars.

By a decision of the Supreme Court of Georgia the Augusta Southern Railroad has again been placed in control of the South Carolina & Georgia and the present receivers removed.

The Chesapeake & Ohio Railroad Co. has ordered two additional locomotives from the Schenectady Locomotive Works and nine consolidation engines from the Richmond Locomotive Works.

Recent orders received by the Elliott Car Co. of Gadsden, Ala., include one for 175 cars for the Lorain Steel Co. of Lorain, Ohio. The cars will be of 80,000 pounds capacity and sixty-six feet long.

The South Georgia Railway Co. at its recent annual meeting re-elected J. W. Oglesby, president; J. W. Hopson, vice-president, and Z. W. Oglesby, superintendent. The report for the year showed that the road is in excellent condition financially and otherwise.

It is now stated that the Birmingham Southern Railway, which has been controlled by the Tennessee Coal & Iron Co., has been secured jointly by the Southern and the Louisville & Nashville. This is practically a belt line in the suburbs of Birmingham, and will be used largely for switching purposes.

At the recent sale of the Staten Island Railroad in New York, by order of the court, it was purchased by representatives of the Baltimore & Ohio Railroad Co., the price paid being \$2,000,000. The Baltimore & Ohio owns extensive terminals at the end of the Staten Island Railroad which form a portion of its waterfront on New York harbor.

It is announced that one or more representatives of fifty mills in four States will be present at the meeting at Charlotte on May 11 of the Southern Cotton Spinners' Association.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

ELECTRIC-DRIVEN MILLS.

Papers Before the New England Cotton Manufacturers' Association.

One of the most timely papers presented at this week's Boston meeting of the New England Cotton Manufacturers' Association was that on the advantages of the electric-driven cotton mill, by Mr. W. B. Smith Whaley of Columbia, S. C. An abstract of the paper follows:

"It is not the purpose of this paper to describe an electric-driven cotton mill, that subject having been previously dealt with in other papers presented to the association at past meetings, but rather to describe the advantages that may be gained by the operation of a mill by electrical transmission of power.

"Taking these in their order, we first find a greater economy in floor space, due to the absence of belt or rope ways, or towers, which gives an advantage in the greater compactness of the machinery space and the entire absence of any attention to this department. The substitution for these of the wiring for the motors and the suspending of the motors throughout from the beams overhead requires no special attention and occupies no floor space. The large belts are entirely superseded by smaller ones, easily put on, and suitable for the subdivision of the power and size of the motors, which seldom exceed in good practice today, where a mill in the beginning is designed for electrical transmission, 150 horse-power in size, and consequently six-inch belt is the largest belt that could be used when one belt is taken each side from each end of the motor.

"Secondly, in the greater convenience and flexibility in the distribution of the power; the wires being run overhead on the ceiling take up practically no space, and they can be conveniently carried to any place in the building. The motors are designed of suitable size, according to the subdivision of the different departments. In the best practice the power of each motor would be limited by the smallest size of shafting suitable to span the bay to which the mill is built, with the advantage of shafting of uniform size throughout the plant and complete duplicity in size of hangers and bore of pulleys. The only variation from this necessary would be the receiving shaft from the motor, which would be made heavy enough to stand the strain of the larger pulleys receiving the power. The turning of angles, where required, is more conveniently done by means of a motor driving the shaft so placed than by means of mule pulleys or other gearing, with the advantage of increased friction. The transmission of power to adjoining buildings, or buildings apart from the main building, is more conveniently accomplished by means of the electric motor than the usual methods of belt holes or shafting through wells or exposed shafting or outside gearing, with the advantage of more complete isolation and less fire risk in these departments.

"Thirdly, the power for the different departments being distributed by independent motors, the variation in speed due to the operation of the different ma-

chines is not felt beyond the subdivision of the power driving that department, and consequently the efficiency of each department is maintained at its maximum. The pickers and openers being generally the machines requiring the greatest amount of power per machine, the variation in power due to the starting or stopping of the machines does not affect any other department, and the convenience of being able to shut down or run this department ahead, without interfering with the balance of the mill, is an advantage. Similar advantages may be claimed for all the other departments throughout the mill. Should the necessity arise for operating any section longer than the rest of the mill, or stopping any part of the mill, there is a considerable gain effected in the saving of all unnecessary friction in operating idle shafting and loose pulleys. The uniform rotary motion of the motors, and consequent steady speed, permits a greater efficiency in the machinery, resulting in larger percentage of production and more uniform tensions and considerable reduction in the wear and tear and supply accounts.

"Fourthly, with regard to the necessary attention required by the power plant and distributing motors, there is considerable economy. The electric generating plant, having no connection with the mill except by means of conducting wires, is much more easily and cheaply maintained than the usual method of driving by means of ropes or belts and flywheel. There is no dust, dirt or lint being continually stirred up by flywheel and belts, requiring constant attention to keep machinery in the power plant clean. There is no pull on the bearings, due to unnecessary straining of ropes or belts, and consequent heating of journals and waste of oil. The entire generator simply turns in its bearings with its own weight, and consequently the oil is reduced to a minimum, and there is no external cause to produce heating.

"The motors in the mill are easily maintained and are oiled no oftener than it is necessary to oil shafting in good practice, they being extremely economical in this respect, and the only attention that they require is to free them at times from excessive accumulations of lint.

"The foregoing applies to electric-driven mills that are designed in the beginning for electric transmission, but not to mills where electric transmission is substituted for ropes and belts, because there can be no saving in initial expense of rope or belt ways, nor can the subdivision of the departments be as economically arranged for maximum efficiency. It is invariably the case in instances where electric power is substituted for direct driving that the motors are placed on the receiving shafts in place of receiving drums, and no flexibility is gained throughout the plant except in so far as the isolation of departments driven from separate headshafts; and in many cases it is a question whether any advantage could be gained, unless such advantage could be shown in power cost. In many instances investors are misled by the price of current per unit of power, and the average mill man may be liable to figure this as economical, where in many instances the price quoted appears to be very low; the actual cost of the power is really higher when wear and tear and depreciation (which is low in an electric-driven mill), heating and attendance, are added to cost of current. And, where the mill is designed in the beginning, the price quoted may often be made economical owing to the initial saving in the cost of the plant; the same price would not be economical for many modern mills already geared with steam or water."

Dr. Wm. P. Wilson of the Philadelphia

Commercial Museum read a paper from the text that cotton manufactures have been in the past, and no doubt will be in the future, one of the most important items in the list of imports in the new possessions which the past year has brought to the United States. He said that in the Philippines it is evident that a trade worth seeing exists, but that American cotton manufacturers, in seeking it, must study carefully the wants of the market and the character of the goods hitherto supplied by the largest seller, Spain. Sight also should not be lost of the fact that the Philippines produce a very fair native cotton, the production of which is likely to be stimulated by settled conditions.

He found a gratifying increase of the popularity and use of American goods in Hawaii. His figures for Porto Rico were of small interest in connection with the subject, and as to Cuba, he considered that there is legitimate outlet there for American cottons to the extent of \$10,000,000 or \$12,000,000 from America under the new conditions of life and trade that will develop rapidly under the stable and liberal government. Cuban trade, he said, is at present in the hands of Spanish merchants, but American cotton-goods exporters need not feel any apprehension on that account. The market is at their doors, transportation facilities and freight rates give them an advantage in entering it, and the quality of goods and enterprise should enable them to control it.

A paper compiled by Secretary Woodbury of the association threw some interesting light upon the controversy of nearly half a century ago between Amos A. Lawrence and General C. T. James regarding the relative advantages of New England and the South as cotton manufacturers.

Other papers were by Mayor Josiah Quincy of Boston; President Stephen Knight of Providence, R. I.; Herbert E. Walmsley, New Bedford, Mass., on industrial institutions, their organization and regulation; Joseph Nasmyth, Manchester, England, on depreciation; William G. Nichols, Lowell, Mass., on methods of cost finding in cotton mills; David Moore Bates, Jr., Wilmington, Del., on gray goods from the bleachers and finishers' point of view; Alfred A. Hunting, Salem, Mass., on the drying of cloth; Arthur Parkinson, New York, N. Y., on points on sizing, finishing and packing goods; Philip Dana, Westbrook, Me., on what belting is made of, and its care; Frank P. Sheldon, Providence, R. I., on auxiliary power plants with electrical transmission at Grosvenor, Dale and Lyman Mills; Sidney B. Payne, Boston, Mass., on fallacies concerning the electric drive; Russell W. Eaton, Brunswick, Me., on oiling fly-frame spindles; Edward W. Thomas, Lowell, Mass., on automatic conveying of cotton from storehouse to picker-room; E. W. Atkinson, Boston, Mass., on roller ginning; Edward Atkinson, Boston, Mass., on impairment of the strength of the cotton fiber between the field and the cloth.

To Expend \$400,000 Enlarging.

All plans have been definitely settled for the enlargement of the Lynchburg (Va.) Cotton Mill Co.'s factory, referred to last week. As has been stated previously, the company intends to double its equipment of 22,000 spindles and 726 looms, and altogether the improvements in view will cost about \$400,000.

The entire plant will be remodeled, all the looms to be placed in a weave shed to be erected, dimensions to be 367x128 feet; all the carding and spinning machinery will be placed in the present mill building; a new engine-house will be erected

80x40 feet in size, together with a boiler-house 52x46 feet, and the boiler capacity will be increased 800 horse-power. There will also be built larger cotton-houses for storing the material, and additions will be made to the electric plant for lighting purposes.

Plans and specifications for the new buildings will be ready in a short time, and contracts will be promptly awarded. Superintendent Emery and Max Guggenheimer, president, will visit New England, and there place contracts for the machinery to be used.

Working for a Mill.

[Special Cor. Manufacturers' Record.]
Tupelo, Miss., April 21.

There has been for some time considerable agitation concerning a cotton mill here, but as yet it has not taken definite shape. It is hoped, however, to perfect within sixty days arrangements for the erection of a mill so as to have it completed before January 1 next, in order to take advantage of a State statute exempting certain manufacturing plants from taxation for ten years. The people of this town have already built a canning factory, a foundry and a furniture factory. One of the largest compresses in the South is situated here.

To Double Its 6000 Spindles.

The Riverdale Cotton Mills, manufacturers of cotton duck, succeeds the Galt Cotton Mills of West Point, Ga. The new company intends to double the mill of 6000 spindles and 160 looms, and some contracts in connection with the improvements have been awarded. Contracts have been made for the picker, opening-room, lapper-room, clothroom and four warehouses for cloth and cotton. The increase of spindles will be, as above indicated, to the number of 6000, and no contracts for the machinery have been awarded yet. Mr. L. Lanier is president of the company.

A New 5000-Spindle Mill.

The new Highland City Mills at Talladega, Ala., has held a stockholders' meeting and elected directors for the first year. The board consists of Messrs. W. L. Miller, G. A. Mattison, A. G. Storey, E. T. Haynes, J. H. Hicks, T. S. Plowman and L. G. Jones. Mr. Hicks will be president of the company, and a 5000-spindle equipment is proposed, as has been stated heretofore, for the production of yarns. Contracts for buildings will be awarded soon, and estimates on machinery are in order.

Cotton Movement.

In his report for April 21 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during the 233 days of the present season was 10,339,790 bales, a decrease from last season of 185,204 bales. The exports were 6,368,963 bales, a decrease of 218,428 bales; takings by Northern spinners 2,020,131 bales, a decrease of 74,118 bales; by Southern spinners 962,254 bales, an increase of 29,369 bales.

To Add 20,000 Spindles.

The Mills Manufacturing Co. of Greenville, S. C., will add 20,000 spindles to its mill. The company has now 10,000 spindles and 250 looms in position, and the addition will give it a total of 30,000 spindles. A number of cottages will be erected as homes for the additional operatives that will be necessary.

Textile Notes.

Messrs. Laubach & Butz of Albemarle, N. C., will establish a knitting mill. They

propose making 150 dozen pairs of hose daily.

The Baldwin Gin Co. of Stephenville, Texas, contemplates the erection of a cotton mill to produce daily 5000 yards of eight to ten-ounce duck.

A large underwear factory will be established at Macon, Ga., by a party who has been induced to do so by the Macon Chamber of Commerce.

The Norris Cotton Mills of Catechee, S. C., have ordered 156 new looms and are making other improvements that will about double their capacity.

Mr. J. C. Vance of Chattanooga, Tenn., is promoting a plan for the erection of a cotton factory, and claims to need subscriptions of only \$15,000 to ensure the enterprise.

The project for a cotton factory at Tupelo, Miss., is progressing. Major John Triplett is pushing the movement, and expects to meet with success in the near future.

Plans for the Norfolk (Va.) Silk Co.'s proposed mill buildings have been prepared by L. C. Holden of New York, and contracts for their erection are expected to be awarded soon.

The Wahneta Knitting Mills of Cedartown, Ga., will expend about \$20,000 in improving and enlarging its mills. New buildings will be erected, new machinery added and a bleachery installed.

Probably the establishment of a factory is contemplated by Mr. W. T. Spauld of Salem, N. C., as he is asking for prices on machinery for manufacturing twine, small cord and rope.

The Cannon Manufacturing Co.'s new mill at Concord, N. C., is being erected at present. The structure will be three stories high, 78x188 feet, and in it will be installed 7000 spindles and 375 looms.

Messrs. C. A. Ensign, J. W. Newton and R. P. Brooks will establish a knitting mill at Forsyth, Ga. A building has been secured and is now being equipped with machinery for producing knit goods; also will be manufactured rope, backbands, horse-collars and pads.

The Newnan Cotton Mills of Newnan, Ga., contemplates increasing to 10,000 spindles, but as yet has made no definite plans to that effect. The present equipment is 6300 spindles, and a dyeing and drying machine will be added soon, besides which there will be a new warehouse erected.

The Bala Cotton Mills of Concord, N. C., is putting in 1000 new spindles.

The Anniston Carpet Co. of Anniston, Ala., recently organized, is to build a structure 52x140 feet and install full equipment for the manufacture of ingrain carpets. About \$50,000 will be invested; sixty operatives will be employed.

The Chatham Manufacturing Co.'s improvements at Elkin, N. C., noted last week, will consist of doubling the present mill. All the machinery that will be required has been purchased. The company's present factory is equipped with three sets of cards, twelve broad looms and thirty narrow looms, its product being blankets, cassimeres, flannels, etc., woolen goods.

Contracts have been awarded to Messrs. Willard & Hampton of Spartanburg, S. C., for the erection of the main building for the Coolemeec Cotton Mills, to be established near Jerusalem, N. C., as recently stated. Contract for the construction of the water-power dam was also given the same firm; the dam will be 477 feet long, the factory building 104x422 feet, and an equipment of 25,000 spindles and 800 looms is proposed. Mr. B. Frank Mebane of Greensboro, N. C., is promoting the company.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., April 26.

The market for cotton oil is not active, but it is steadily held at late bid prices, and, notwithstanding the indifference of exporters and dullness generally, there is no pressure to sell. There is very little on offer, and this is absorbed by the chief producer when possible, thus keeping the market moving in the absence of home and foreign demand. The purchaser referred to controls the bulk of stocks at this market, and is ready to buy up arrivals of any lots in sight. All this is significant, and will not be lost on the trade at large with regard to the outlook. There has been a steady and general falling off of hog receipts again during the past week, with 95,000 packed less than a year ago. The quality of hogs is also much inferior than the usual supply, and prices of same are higher. In view of these conditions it is difficult to understand why lard should rule so low, and it would be inexplicable if the latter should continue much longer, the natural order of things pointing to improved prices. July lard, Chicago, is offered at 5.35 cents. Tallow is a shade lower in price, due to the decline in foreign market and lack of demand. New York city tallow is offered at 4 3/4 cents. With regard to the general condition of the trade throughout the country we are pleased to note it is less than usual dependent upon export wants, at least for the present. The stocks of desirable oils, which include the far-off grades as well as the better qualities, are coming under good control, and are going into home consumption freely. There are here and there scattered through the South fair quantities of this class of oil, which the recent advance in prices does not draw out for offer, as the mills owning such stock are abundantly able to carry it, relying upon the declaration that it will be wanted at a substantially higher price long before the season closed. But all grades of oil are in comparatively light supply over the South as against last year at this time, making the general position firm for all grades of oil. The requirements of the domestic soap trade this year has been beyond all precedent, attributable partly to the scarcity of tallow, but as well to the very good business in manufactured products that is steadily coming to hand. Not a few of the mills have closed down for the season, probably four-fifths of the entire number, and it is safe to assume that production hereafter will not materially influence the market until the next crushing season opens. The following are closing prices: Crude, 22 to 22 1/2 cents; crude, loose f. o. b. mills, 18 1/2 to 19 1/2 cents; crude, loose f. o. b. mills, 15 1/2 to 18 cents; summer yellow, prime, 26 to 27 cents; summer, choice, 27 cents; summer, off grades, 25 to 25 1/2 cents; yellow, butter grades, 28 to 30 cents; white, 30 to 31 cents; winter yellow, 30 cents, and salad oil, 31 cents. English refined, Hull, May-August, is offered at 15s. 6d.

Cake and Meal.—There is very little business doing in mill feeding stuffs at this market. Abroad, especially in the United Kingdom, all mill feeding stuffs are in buyers' favor, excepting American cotton cake. Prime cake is selling at £5 18s. 9d. per ton. The market for Egyptian cottonseed in Hull, England, is steady at £6 1s. 3d. per ton.

The Victor Cotton Oil Co. of Gaffney, S. C., will commence work on its new

plant this week. The mills will be ready for the next crop.

Cottonseed-Oil Notes.

The McCormick Cotton Oil Co. of Columbia, S. C., was chartered last week with a capital stock of \$15,000. The incorporators are J. E. Britt, John J. Andrews, J. Q. Stilwell, M. L. B. Sturkey and J. B. Harmon.

It is stated that the Consumers' Cotton Oil Co., owned by Swift & Morris of Chicago, has purchased twenty acres of the Sledge land at Forrest City, Ark., for a mill site. It is the intention of the firm to erect a cottonseed-oil mill, and the Choctaw & Memphis and Iron Mountain railroads will make extensive improvements in order to afford the company the best shipping facilities.

A deal was closed last week in Anniston, Ala., for the erection of a cottonseed-oil mill. All the details have been arranged and the work of erecting the necessary buildings will begin without delay, in order that the plant may be in operation in time to use this year's crop of cottonseed. The promoters of the new company are Messrs. Pinecard of Opelika, Ala., and Vernon of Atlanta, Ga.

The market for cottonseed products at New Orleans continues very steady. Cottonseed oil is moving freely, and prices are not materially changed from those quoted a week ago. There is a good export demand for cake and meal. Receipts of cottonseed from the valley continue moderate in volume. Receivers' prices are as follows: Cottonseed, \$5 per ton (2000 pounds) on river bank from New Orleans to Memphis; cottonseed meal jobbing at depot, \$17 per short ton and \$19.50 per long ton for export f. o. b.; cottonseed oil, 15 to 16 cents per gallon for off crude loose f. o. b. in tanks here; in barrels, 17 to 18 cents; prime crude in bulk, 15 to 16 cents, and 21 to 23 cents for refined oil at wholesale and for shipment; oilcake, \$19.50 per ton f. o. b.; linters—A, 2 3/4 cents per pound; B, 2 1/2 cents; C, 2 1/4 cents; hulls delivered at 12 1/2 to 15 cents per 100 pounds, according to the location of the mills.

ENGLISH IRON AND STEEL MEN.

Noted Experts Studying the Alabama Regions.

[Special Dispatch to Manufacturers' Record.] Birmingham, Ala., April 26.

Lothian Bell of Bell Bros. and James Pantan, general manager of Dorman, Long & Co., both of Middlesboro, England, who stand in the front rank of the iron world, were here last week examining our furnace and steel plants. The two firms are so intimately associated as to be practically one, and have appropriated \$1,500,000 to erect a steel plant, but have not determined yet the character of output they will produce. Their visit to this country is to examine cost, workings and improvements, with view of adopting what seems valuable. Wellman, who planned the large steel mill which is now being built here, will probably be consulting engineer for their plant. Some reports say this is definitely decided. John W. Harrison is credited with intention to erect two furnaces and steel mill to make steel castings. He is not in town, and cannot confirm report, but source of information is reliable. J. M. KENNARD.

"Bridges and Frame Structures" is the title of a new special periodical, publication of which has just begun by the D. H. Ranek Publishing Co. of Chicago.

It is said that the Huguenot Mills of Greenville, S. C., will make improvements to cost \$30,000.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record, Baltimore, Md., April 27.

A quiet tone has been the rule in nearly all departments of the local lumber market during the past week, and the volume of business has been only moderate. Receipts continue light, and stocks at all milling sections are very badly assorted, as the demand has been quite brisk during the past thirty days. Stocks of lumber in the local market are being well sold up in both white and yellow pine. White pine has advanced sharply during the present year, and those that were fortunate to have large stocks held over from last year have been making handsome profits. In North Carolina pine the conditions are similar, and prices for all air-dried lumber have shown a material appreciation in values. The demand for kiln-dried yellow-pine lumber is very pronounced at present, and orders are difficult to fill promptly. The situation in hardwoods is very satisfactory as to prices, all of which have recently shown a sharp advance. Oak, walnut, poplar, ash and other woods are very scarce at the moment, while the demand from out-of-town buyers continues unabated. The foreign export trade is reported quite promising, and shippers are encouraged with the present outlook.

Norfolk.

[From our own Correspondent.]

Norfolk, Va., April 24.

The market here in all wood products continues to show an increase in the volume of trade, and the demand for North Carolina pine is still showing some interesting features. The appreciation in values of box lumber and other grades is quite notable, and edge box at \$10.50 and \$11 is most unusual. Other grades are also in urgent demand, and mills, although working up to their full capacity, find it difficult in some cases to fill orders. The demand from Northern sources is improving, and buyers pay the advance readily in order to meet their requirements at home. Stocks cannot, under the present rush or orders, accumulate, and those having the stock to sell are generally reaping the harvest. Planing mills here are very busy, and dressed lumber has advanced in sympathy with rough grades. The foreign demand is steadily gaining in the number of orders and scarcity of the desirable grades for the European markets precludes the possibility of filling them promptly. The home demand is also showing favorable features, large amounts of lumber going into consumption for building purposes in the city and suburbs. In lumber circles during the past week the meeting of the stockholders of the Tunis Lumber Co. was a prominent feature. At the meeting the stock was well represented, and the old directors were unanimously re-elected, while three new directors were added. Messrs. Dixon, Sims and Reed, prominent capitalists of Maryland, Rhode Island and Virginia, were elected unanimously. This company has been one of prominence for a number of years, having immense timber landed interests and possessing all the facilities for conducting the extensive trade which it controls. Several changes, it is stated, are about to take place in the management of its affairs, and Mr. Samuel Eccles, Jr., is to be made secretary of the company, actively resuming the work renounced some years ago. Mr. Eccles is one of the charter members of

the company, and thoroughly conversant with its affairs, and Mr. J. H. T. Cockey of this city is spoken of as assistant secretary.

Mobile.

[From our own Correspondent.]
Mobile, Ala., April 24.

The lumber and timber market has ruled fairly active during the past week, and the situation generally is very satisfactory to shippers and manufacturers. Receipts of timber have been rather light during the week, the high water in the upper streams preventing lumbermen from rafting successfully. The tone of the market may be written firm, and for sawn timber there is a fair demand at 12½ to 13 cents per cubic foot. Cypress logs are steady at 7 to 10 cents per cubic foot, and pine saw logs at \$7 per thousand superficial feet. Stocks of hewn timber are light, and the tone is firm at 13 to 13½ cents per cubic foot. Hewn poplar is in demand at 12 cents per cubic foot. There is a good demand for lumber and all the mills here are running on full time, with a good supply of orders on file. The shipments of sawn timber last week were much larger than usual, 467,098 cubic feet having been shipped, of which 68,075 were for Greenock, 236,076 for Manchester, 62,292 for Liverpool and 100,655 for Belfast. Of hewn timber, 13,966 cubic feet went to Belfast and 25,185 to Liverpool. Some large lots of lumber were also shipped to South America and Mexico, and nearly a million feet to the United Kingdom. The total shipments of lumber for the week amounted to 2,117,535 superficial feet. The freight rates on lumber and timber are steady, with a light offering of desirable vessels. The last business reported was at 90/ prompt for timber from Pensacola to Cardiff and 101/3 old form for timber from the same port to Liverpool. Several steamers are reported taken to load here for European ports on private terms.

Beaumont.

[From our own Correspondent.]
Beaumont, Texas, April 24.

Of the general trade of this growing city it is safe to say that the most encouraging features characterize all commercial and industrial operations. The volume of trade in every line shows a remarkable increase over the corresponding period last year, and the growth of the city is of a most permanent and healthy character. An evidence of the rapid commercial strides the city is making is shown in the organization last week of a new bank, the business of the city being so large that another bank is absolutely necessary to accommodate the commercial and industrial interests. The new bank was organized at a meeting last Tuesday, when a number of citizens met and stock books were opened, at which \$69,300 was subscribed by twenty-nine citizens. After some discussion and the plan and scope of operation being announced, it was concluded that the bank could be organized with a paid-up capital of \$100,000. The new institution is to be known as the Beaumont National Bank. While the general outlook for business of every character is most encouraging, the primary industry of lumber here is still forging ahead, and the business is of a brisk and vigorous tone throughout the various avenues of the trade. The demand from all points in the State is improving, and from points in the Northwest there is a decided increase in the number of orders during the past week. Receipts of special bills are liberal, and the demand from railroads, agricultural-implement factories and other woodworking concerns most pronounced. At various milling sections adjacent to this city the same activity prevails, and at Orange, Westlake

and Lake Charles, La., everything denotes a full volume of trade in every line of the lumber industry. The export trade through Sabine Pass continues to show many favorable features, and a number of large lumber concerns here and at Orange are making large shipments to load steamers for European ports and other vessels for the Mexican and Cuban trade. The contemplated improvements at Sabine Pass are about to be commenced. The contract for dredging the jetty channel to a depth of twenty-five feet at mean low tide will, it is said, be carried out at once. The dredging of the channel from the Gulf up into the Pass will be of substantial benefit to the shipping facilities of the port.

Lumber Notes.

The saw mill operated by J. L. Carman at Pidcock, Ga., known as the Pidcock Mills, was destroyed by fire on the 13th inst. The insurance is \$7000 and the total loss estimated at \$25,000.

Mr. Frank Hitch, the owner and operator of Hitch's lumber mill in Park View, Portsmouth, Va., has been selected to represent that city in the ferry appraisal shortly to be made for the new lessees.

Messrs. Cooney, Eckstein & Co., prominent lumber shippers at Savannah, Ferdinandina and Jacksonville, have opened an office at Brunswick, Ga. Mr. B. P. Coleman of Savannah, an expert in lumber, will manage the Brunswick office.

The actual work of replacing the Cummer lumber mills at Jacksonville, Fla., has commenced, and the saw and planing mills which were destroyed by fire in March last will be replaced by new ones having a capacity of 125,000 feet of lumber per day.

The Black & Walk Stave & Lumber Co. was incorporated last week at Little Rock, Ark. The capital stock of the company is \$8000. The corporators are J. W. Black, Joe Walk and J. M. Lindsey, and the place of business Corning, Clay county, Arkansas.

The Industrial Lumber Co. of Beaumont, Texas, on the 14th inst. secured a contract from the government for 500,000 feet of lumber, which is expected to be the highest-grade lumber ever supplied by a Southern mill. The lumber is to be shipped to Porto Rico. The company will fill its contract from its mill at Call.

It is stated that D. W. Williamson & Co. of Indianapolis, Ind., have decided to locate a veneer factory in Baltimore. The firm has already broken ground for the factory, which will be about 80x100 feet in size. It will contain all the most modern machinery for cutting veneers from mahogany, walnut, cherry and other hardwoods.

The Southern Novelty Co. of Hartsville, Darlington county, South Carolina, received its charter last week. The incorporators are J. L. Coker, J. L. Coker, Jr., J. J. Lawton and D. R. Coker. The capital stock of the company is \$6000. The company will enter largely into the manufacture of woodenware and articles made of other material.

Mr. Isaac T. Mann, president of the Bank of Bramwell at Bramwell, W. Va., has purchased large timber interests in Burke, Caldwell and Mitchell counties, paying for the same \$35,000. Mr. Mann has also bought the Linville River Railroad, extending from Cranberry to Pinola on the Linville river, a line built to market the timber from the tract purchased by Mr. Mann from Michigan parties.

Messrs. Craig & Warner of Philadelphia have purchased the interest of Irvine & Betts in the Dul and Irvine timbered lands of Shady Valley, Tenn. There are

several thousand acres of fine pine timber in that section which will be developed when the extension of the Virginia & Southwestern Railway, now being built, is finished. Practically no lumbering has been done in that section, which is yet a virgin forest.

The Utica Cabinet Co. of Utica, N. Y., closed a deal on the 17th inst. for S. W. Graves' abandoned furniture and mantel plant in Knoxville, Tenn. The plant is valued at \$50,000. The Utica people will move their entire plant from New York State to Knoxville and establish the only roller-top-desk factory in the South. The company will at once make contracts for lumber from mills of Georgia, North Carolina and Tennessee.

The Catawba Lumber Co., whose plant is near Hickory, W. Va., has been for several years past floating logs down the Catawba and its tributaries to the big booms at the saw mills. The company has recently changed its plan of operations, the logs now being sawed in the forest with portable saws and the planks floated down stream. Their lumber by this method can be floated from the mountain coves at all seasons without waiting for a flood.

It is stated that the lumber industry in West Virginia is just now enjoying the greatest boom in its history. At Davis, W. Va., the Blackwater Lumber Co. cut in one day last week 195,617 feet in nine and one-half hours. The Beaver Creek Company's mills at Davis are also taxed to their utmost to fill orders. At Dobbin, Whitmer, Hambleton and other points along the West Virginia Central Railroad scores of lumber operators are on the ground daily looking for locations.

A charter was granted on the 25th inst. to the Atlantic Coast Lumber Co. of Norfolk, Va., with a capital stock of not less than \$1,000,000. The principal office is to be located at Norfolk, with branch offices in other parts of Virginia and the United States. The officers of the company are Lewis A. Hall, Bay Mills, Mich., president; Edward B. Freeman, vice-president and general manager; Charles B. Fearing, New York, treasurer; Robert L. Montague, Norfolk, secretary.

The twenty-seventh special anniversary edition of the London Timber Trades Journal, published by Wm. Rider & Son, Limited, of London, England, just issued, is, as usual, full of interesting matter relating to the timber industry of Great Britain and the Continent. It also contains interesting articles covering the lumber and timber industry of the United States. The publishers also issue a Continental edition in the French language. One of the special features of the issue is the complete and exhaustive tables of statistics relating to stocks on hand at the ports of Europe. The whole work is invaluable to lumbermen in both the Old and New World.

The third annual convention of the Mississippi Retail Lumber Dealers' Association met at Jackson, Miss., on the 18th inst. B. A. Tucker of Senatobia presided and W. G. Harlow of Yazoo City acted as secretary. The minutes of the last annual convention were read, after which the report of the secretary and treasurer were submitted and the annual address by President Tucker delivered. A committee on resolutions revised the by-laws. The auditing committee reported that the accounts of the association were correct. Secretary Harlow was appointed a delegate to attend the general convention in Chicago on the 27th inst. The association elected the following officers: President, B. S. Tucker; vice-president, B. E. Sulphur; secretary and treasurer, W. B. Harlow; board of directors,

L. F. Grisham, W. G. Nicholson, M. Love and C. Olson. The association will meet next September in Yazoo City.

A large deal in mill property was consummated at Georgetown, S. C., on the 19th inst., by which the large saw and planing-mill plant of Jacob Savage was transferred to E. C. Freeman, L. R. Freeman, R. L. Montague and their associates. In addition to the mill plant the syndicate has purchased two large pieces of property from the Georgetown Land Association and Mr. J. Phillips. This syndicate owns thousands of acres of timber lands in that section, and will run a railroad into the property for log trains. The erection of a new three-band saw mill will soon be commenced to run in conjunction with that purchased of Mr. Savage, which will make a daily capacity of 150,000 feet of lumber.

A meeting of the stockholders of the Tunis Lumber Co. was held in Norfolk, Va., on the 19th inst., at which 80 per cent. of the stock was present in person and by proxy. The following directors were unanimously elected for the ensuing year: Robert B. Dixon, Easton, Md.; Gardner C. Sims, Providence, R. I.; W. H. M. Reed, Norfolk, Va.; Samuel Eccles, Jr., Baltimore, Md.; A. R. Cathcart, W. W. Tunis and G. M. Serpell, Norfolk, Va.; H. C. Tunis and Theophilus Tunis, Baltimore, Md. Of the first three directors mentioned, Mr. Dixon is president of the Easton National Bank of Maryland, Mr. Sims is a chief engineer in the United States Navy and builder of the Arrington & Sims high-speed engines, and Mr. Reed is a member of the export lumber firm of Reed Bros. & Co. of Norfolk. The other members of the board have been identified with the company since its formation. The officers elected were Theophilus Tunis, president; W. W. Tunis, first vice-president, and A. R. Cathcart, second vice-president. An inspection of the company's property in Norfolk showed the mills running at their full capacity, a plentiful supply of logs, mostly from their own timber lands, and the outlook for business promising.

Scribner's Magazine for May has secured from Major-General Leonard Wood, the military governor of Santiago, the first official account of the great work which has been accomplished in that province. It is practically the making of a State by a military dictator, all of whose purposes are benevolent, and who has no legislature or other authority to consult, deriving his power directly from the President of the United States. General Wood's narrative, which is the only thing that he has written, is marked by a forcible directness and modesty in telling of the things accomplished. The way in which the city was cleaned, the indigent relieved, the streets repaved, schools established and all of the machinery of a civilized government instituted is a remarkable record of achievement in military government. The illustrations contrast the old Santiago with the new, and show the work of regeneration.

The Young Men's Business Association of Richmond, Va., which has been instrumental during the past year in movements for the industrial and commercial development of that city, have elected as officers Henry Lee Valentine, president; John M. Taylor, vice-president; R. R. Harris, secretary; Dean Maury, treasurer; B. S. Hume, W. S. P. Mayo, Hill Montague, J. L. Hill, R. H. Meade, O. H. Funsten, Milton Straus, H. G. Eichelberger, James H. Scott, John S. Bryan, Reuben Burton, Morgan R. Mills, T. W. Chelf, Arthur B. Clarke, William C. Noland, Warren P. Taylor and R. A. Lancaster, directors.

MECHANICAL.

Marine Generating Set.

In the design of the generating set illustrated herewith compactness, accessibility, economy and stability, with consequent lightness of parts and ability to maintain an excessively high rate of

provided with individual sight-feed oilers and connections to the various bearings.

The generator, the armature of which is coupled to the engine shaft, is carried upon a continuation of the engine base, and is of the six-pole type, with outboard, ring-oiler bearing. Its capacity at 425 revolutions per minute (the speed of the engine) is forty kilowatts. The field ring

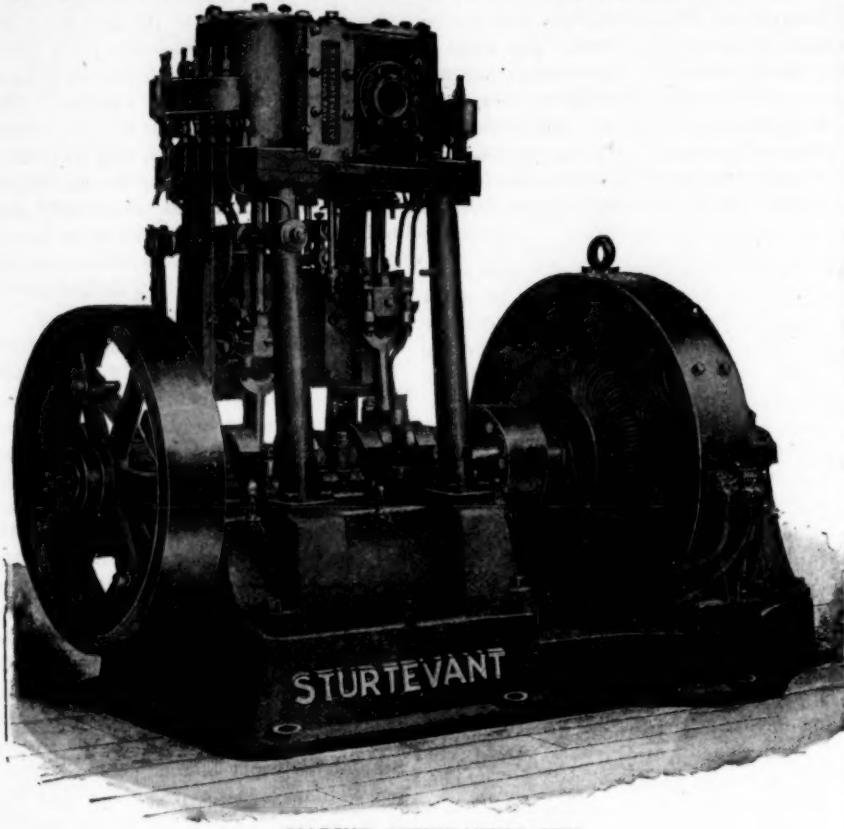
limit of temperature rise to 90° F. after full-load run of ten hours.

This set was designed by the B. F. Sturtevant Co. of Boston, Mass., and is one of a considerable number of types which it is manufacturing.

Acid-Phosphate Screens.

The special screen illustrated herewith is a modification of the Jeffrey Columbian separator, which has been upon the market for some time. This screen is designed more particularly for screening acid phosphate and similar sticky or moist material. It consists of a well-

The E. W. Bliss Co., 137 Plymouth street, Brooklyn, N. Y., builds these presses, and from time to time has made various improvements in the details of construction, but recently decided to make entirely new designs, embodying all the latest and best ideas in press construction known to the trade. This purpose has been very successfully carried out in the engineering department. Much time and study has been devoted to the designing of this new line of presses, and the result is shown in the accompanying illustration. Experts in press construction will at once appreciate the "straight-



MARINE GENERATING SET.

speed during a long period, have been most carefully developed.

The engine is two-cylindred, the cylinders having their axes parallel and being contained within the same casting. The diameter is very large, relatively, to the stroke, the size represented here being nine-inch cylinders, with five-and-one-half-inch stroke. The valves, which are of the piston type, are two in number, placed in spandrels between the cylinders and actuated from a yoke below, which, in turn, receives its motion from a rocker arm from the eccentric.

The valves, which operate in unison, are so designed that steam is coincidentally admitted to the top of one cylinder and the bottom of the other. The motion of the pistons is transmitted through large piston rods to slipper crossheads, and thence through marine type connecting rods to the double crank below.

The crankpins are set at an angle of 180 degrees, so that the vertical action is balanced, one crank moving upward as the other moves downward; this feature is instrumental in the securing of a high rotative speed.

The cylinders are supported upon four heavy columns, as shown, the rear columns supporting the guides for the crossheads, and all being securely bolted at the bottom to the very substantial bed casting. This bed carries three main journal bearings, brass-bushed in their lower halves, and provided with continuous oiling devices in connection with oil receivers beneath. The interior of the bed forms a basin which collects all drip from water or oil.

The regulator is of special construction, and arranged to operate the valve in such a manner as to regulate the point of cut-off for all loads. It is exceedingly powerful, although sensitive to very slight changes in speed.

The connecting rod and crossheads are of forged steel, the cylinders are thoroughly lagged and an oil tank is mounted upon each end of the cylinder casting and

is of cast steel. The cores are of wrought iron, with cast-iron shoes.

The armature is built up on a spider and arranged for thorough ventilation through internal ducts extending out through the armature windings. The armature in operation acts as a blower, and causes the passage of air through these ducts.

built wooden frame, which supports a special mounted screen. This screen is vibrated by means of eccentric rods and cams at the rate of 200 to 300 revolutions per minute, as may be deemed advisable in handling various grades of material.

The screening frame is confined at its four corners between knockers, which can be adjusted to suit the material. The machine is made in sizes and with screening surfaces to suit the conditions. Interested parties can obtain prices and further descriptive matter by addressing the manufacturer, the Jeffrey Manufacturing Co., Columbus, Ohio.



ACID-PHOSPHATE SCREEN.

line" principle adopted, which not only produces a graceful appearance, but also a much more rigid frame, resulting in greater strength with the same amount of metal. Notwithstanding the fact that the builder has increased the weights, making a large increase in strength over the old pattern, it has at the same time reduced the selling price materially. The slides and gibs are very long, thus insuring the best results and longest life for the dies and tools usually operated in such presses. The shafts are of the best forged steel, of large proportions and well fitted. The slide connections in the larger sizes



ACCEPTED DESIGN FOR NEW PUBLIC SCHOOL, CHARLOTTE, N. C.; FRANK P. MILBURN, ARCHITECT; COST \$20,000.

The series winding of the field coils is of flat copper ribbon, and the shunt winding is of wire. Both windings are placed on the pole entirely independent of each other, and either may readily be removed; their design is such as to permit of free circulation of air upon all sides.

The generator is designed for sparkless operation under all changes of load from no load to 25 per cent. overload, with a

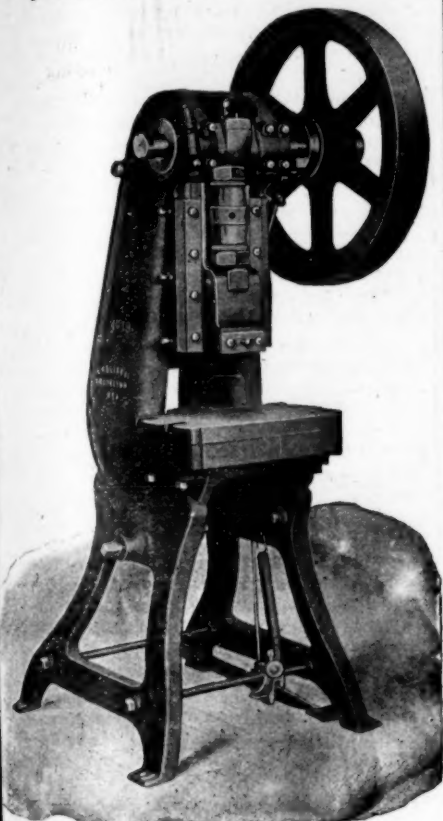
A "Twentieth Century" Press.

More than twenty years ago the "Bliss" inclinable power press was invented and placed upon the market. Its many points of excellence were recognized by manufacturers of sheet-metal goods, and it soon became so popular that in the United States and some foreign countries its general features were copied more or less,

are made of forged steel, are bronze-bushed and practically unbreakable. The "Bliss" standard clutch, but of enlarged sizes and with several recent improvements in the mechanism, is employed, and it is claimed to be the strongest and safest in use and unequalled for general work. The flywheel is bronze-bushed, and the bushings may be easily removed when worn. Two or more

clutch-locking points are provided, locking the wheel to the shaft the entire length of its bearing. The press frame is so constructed that feeding devices, gauges and other attachments can be easily applied; it may also be easily inclined to any angle which best suits the operator.

The builder claims that no type of power press has ever met with such favor



"TWENTIETH CENTURY" PRESS.

for convenience, ease of manipulation, rapidity in producing work and in general range of usefulness as the press here illustrated. It is built in many sizes, both as flywheel and geared machines, ranging in weight from 300 to 6500 pounds.

For further particulars apply to the builder.

YADKIN WATER-POWER.

Development of the Narrows for Industrial Purposes Assured.

It is announced that hydraulic engineers have about finished their work preliminary to the development of the magnificent power of the Narrows of the Yadkin river in North Carolina, and it is estimated that the plant, representing an outlay of \$3,000,000, will be able to develop 60,000 horse-power, which it is proposed to distribute by electric cables to manufacturing plants. At the Narrows the Yadkin river, which is 1000 feet a short distance above, is forced through a gorge one-quarter of a mile long and seventy-five feet across at its widest part. Through this gorge the river falls from thirty-six to forty feet.

Several months ago the North Carolina Power Co. was incorporated for the purpose of making the developments. The widely-known firm of Messrs. J. G. White & Co. (Incorporated) of New York city, who built the Niagara Falls-Buffalo plants, have been engaged to act as engineers and contractors for the work, and their Baltimore representative, Mr. C. G. Young, has just returned from an examination of the property. The North Carolina Power Co. has placed its capital stock at \$5,000,000, and, besides, an issuance of \$2,500,000 in bonds is planned. The Manufacturers' Record is reliably informed that all financial arrangements have been successfully closed. Mr. E. B. C. Hambley of Salisbury, N. C., is president of the company.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record, Baltimore, Md., April 27.

Receipts of phosphate rock at this port during the month have been light, and the market is fairly active, with values firm. The demand for domestic and foreign business is improving, and brokers report some good sales for the week. The business in phosphates in South Carolina is at the moment flourishing, and the demand fair, with prices nominally steady. The demand for acid phosphate is particularly good from interior points in the State. Prices for crude rock at the mines are \$3, and hot-air-dried \$3.50 vessel Ashley river. Reports from all sections of Florida continue very encouraging, and the outlook is good for a large output during the present year. Prices are very firm, both for land rock and pebble, and from the number of charters for the month large shipments are expected. Shipments from Tampa so far this month are good, and for the month of March the record shows shipments of 73,934 tons of pebble and land rock. From all the ports there is great activity among shippers, as prices now are appreciating and the demand generally urgent, especially from European ports. In Tennessee the tone is firm for all grades of phosphate, and the output is increasing as the weather becomes more settled. Prices are firm at \$3 to \$4.50 for home and export trade. The shipments of phosphate rock from Pensacola for the quarter ending March 31 aggregated 21,461 tons, mostly from the Tennessee phosphate fields, and the shipments for the present month will be considerable. The total shipments from Mt. Pleasant last month to all points were 27,315 tons. The phosphate charters reported in New York last week were as follows: Schooner R. C. Graham, 325 tons, from Cartaret to Wilmington, Del., at 75 cents; schooner Senator Sullivan from Charleston, S. C., to Baltimore at \$2.05; British steamer Elton, 1596 tons, from a Southern port to the United Kingdom or Continent on private terms; British steamer Benwick, 1815 tons, from Tampa to Stettin at 17/6, May, and schooner Andrew Adams, 712 tons, from Port Tampa to Cartaret on private terms.

Fertilizer Ingredients.

The market for ammoniates has ruled quiet during the past week, and there has been no movement of importance. There is some business reported with Eastern buyers, there being a fairly active demand from that quarter. Animal ammoniates are firmly held, and stocks in the West are reported light, with values firm. There is some inquiry for dried blood for export, but no transactions are reported. Southern manufacturers are out of the market, and very little trade comes from that section. There is a moderate demand for sulphate of ammonia, and values are firm. Nitrate of soda is steady.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)	\$2 75 @ 2 80
Nitrate of soda	1 70 @ 1 72 1/2
Blood	1 90 @ 1 92 1/2
Hoof meal	1 75 @ 1 77 1/2
Azotine (beef)	1 85 @
Azotine (pork)	1 85 @
Tankage (concentrated)	1 65 @ 1 67 1/2
Tankage (9 and 20)	1 72 1/2 and 10
Tankage (7 and 30)	17 00 @ 17 50
Fish (dry)	20 00 @
Fish (acid)	12 00 @

Phosphate and Fertilizer Notes.

The total shipments of Tennessee phosphate rock for the month of March from the Mt. Pleasant field aggregated 27,315 tons.

The plant of the Imperial Fertilizer Co. at Gilmerton, near Norfolk, Va., was de-

stroyed by fire on the 25th inst., entailing a loss of nearly \$20,000, which is about covered by insurance. The firm expects to rebuild.

The new phosphate elevator at Fernandina, Fla., is now in operation, and 2000 tons of phosphate rock per day are now being placed on shipboard. The carrying capacity of the new improvement is working admirably.

The shipments of phosphate rock from Port Tampa for the three months ending March 31, 1899, were as follows: Hard rock, foreign, 15,854 tons, and pebble 41,779 tons, of which 25,478 tons were foreign and 16,301 tons domestic; total hard rock and pebble, 57,633 tons.

At a meeting of the State phosphate commission at Columbia, S. C., on the 24th inst. Col. S. W. Vance of the State Dispensary was elected State phosphate inspector to succeed Mr. A. W. Jones of Abbeville. Colonel Vance is well acquainted with the requirements of this new position.

The British steamer Armenia sailed last week from Port Tampa with a cargo of 3075 tons of phosphate rock from the mines of W. N. Campe for Gothenburg. The Norwegian steamer Nord also sailed from the same port on the 16th inst. with a cargo of 2883 tons of pebble phosphate from the Palmetto Phosphate Co. for La Palice, France.

The port of Pensacola is making rapid strides towards supremacy as a deep-water seaport of the Gulf, and as a phosphate port of export shows a remarkable improvement over the past year. The shipments of phosphate rock in 1898 aggregated 68,704 tons, and for the three months ending March 31, 1899, the shipments amounted to 21,461 tons, of which 18,054 tons were foreign and 3407 tons domestic. The indications are favorable for a phenomenal increase during the present year over that of 1898.

Louisiana as a Salt Producer.

The Gulf Company, a Chicago corporation, has secured the salt deposits on Avery Island, La., and it intends to mine the salt on a very extensive scale, carrying the output to New Orleans and elsewhere in vessels. C. B. Wiser of Chicago, general manager of the company, in a recent interview relative to the enterprise, said:

"There are 15,000,000 barrels of salt consumed in the United States every year. The consumption of salt and sugar is about the same, that is, one bushel per person. So far the South has produced very little of the enormous salt production, the output amounting to about 20,000 to 25,000 barrels out of the 15,000,000 of barrels consumed in the United States annually. It was for the purpose of getting into this great undeveloped field that this company of Chicago capitalists got together and took possession of the salt mines at Belle Isle.

"The output will be about 500 tons a day. We have already spent \$150,000 in sinking the shafts and in getting ready for operations at Belle Isle, and we will spend, perhaps, almost that much more in the completion of the great plant which Louisiana will soon possess. I do not hesitate to say that the State of Louisiana will have the best salt mine in the country, for several reasons, one of which is the water transportation which is available and which we will utilize to its fullest extent. The largest salt mines in the United States today are at Retsof, New York State, where the production amounts to 250,000 tons per year. Then there are two good mines in the State of Kansas, but they are not so extensive. The Retsof salt, however, in the matter

of quality cannot be compared to the Louisiana Belle Isle product. The salt at Retsof has a dirty, dingy appearance; the Belle Isle salt is as white as snow, and it is almost chemically pure.

"The salt industry is destined to become one of the greatest industries in the State of Louisiana, and in a short time the once unprofitable, unsalable Belle Isle will hold the key to the salt situation in the United States. It is our full intention to supplant a great portion of English salt now coming into the United States. One of our first aims is to knock this salt importation as much as possible. I believe all the salt we need can be mined and furnished from our home industries, and we are determined to do it. We are now arranging to put in an evaporating plant to make a fine table salt and the highest grades of the product. In the market this finer salt is called evaporated. The water transportation will enable us to compete with everything in the country. We are going to do all our shipping by schooners and steam vessels."

TRADE NOTES.

Ericsson Telephone Company.—The Ericsson Telephone Co. of 20 Warren street, New York, will remove to 296 Broadway on or about May 1.

New Jersey Zinc Company.—The New Jersey Zinc Co. has removed its office recently from 52 Wall street to the Empire Building, 71 Broadway, New York city.

Theodore Lexow.—Theodore Lexow of 105 Broadway, New York, has removed to Nos. 12 and 16 John street, near Broadway. Mr. Lexow is an importer of carbon and bronze.

Wagon Factory For Sale.—J. W. F. Allemon of Salem, Va., is offering for sale a complete wagon factory, with stock of seasoned lumber, etc., on hand ready to commence operations.

American Woodworking Machine Company. This company will remove its New York salesroom from 100 Liberty street to 80 Liberty street, where larger and more commodious quarters will be occupied.

Cotton-Manufacturing Opportunity.—What appears to be an excellent opportunity to engage in cotton manufacturing in the South is advertised in our columns today by Messrs. S. W. Peek and J. D. Matheson of Hartwell, Ga. Address either of the parties named for information.

Successful Baling Presses.—Recent orders filed by the Boomer & Boschert Press Co. of Syracuse, N. Y., included one for a size "A" knuckle-joint baling press, a size "B" knuckle-joint baling press, and two wrought-steel-frame yarn baling presses. These presses were all ordered by Southern cotton mills.

In a New Location.—On May 1 the Abendroth & Root Manufacturing Co., manufacturer of the Root improved water-tube boiler and Root's spiral-riveted pipe, will remove from 28 Cliff street to the new building erected at 90 John street, New York city, where will be occupied commodious offices on the sixth floor.

Ball Engines.—Recent orders filled by the Ball Engine Co. of Erie, Pa., called for a 150-horse-power engine for direct connection with Western electric generator; two engines for electric plant at Kansas City; 300-horse-power tandem compound engine for direct connection with Westinghouse generator, and engine for direct connection to a Keystone generator in electric plant at Philadelphia.

Spool and Bobbin Factory for Sale.—There is offered for sale in our advertising columns this week a complete spool, bobbin, reed, shuttle, etc., factory. The plant is located in Western New England, where it has been operating for some years. The present owner, being a non-resident, is not able to give the business his personal attention, and therefore wishes to dispose of it. Very low figures will be quoted. In view of the extraordinary activity in textile circles this year, such a plant is doubtless a good investment for parties who can give their personal attention to the development of it. The plant could be readily removed to a Southern city. For information address P. O. Box 2905, New York city.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with every one interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matter reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Carpet Factory.—The Anniston Carpet Co., lately reported as organized by William Zinn, will erect a factory building 52x140 feet to cost \$50,000 and employ sixty operatives.

Birmingham—Laundry.—Edwin O. Stafford has established a steam laundry at Nos. 519-521 South Twentieth street.

Birmingham—Iron Furnaces.—The Tennessee Coal, Iron & Railroad Co. has put in blast its furnaces at Bessemer and Ensley City.

Birmingham—Trunk Factory.—The G. E. McKenney Trunk Co. of Chattanooga, Tenn., is establishing a branch factory at Birmingham to be under the management of Frank R. Emerson.

Birmingham—Iron Furnace.—E. M. Tutwiler, of the Tutwiler Coal & Iron Co., has purchased the Vanderbilt furnace property, including twenty-five acres of land, also a number of tracts of mineral lands. The furnace is being repaired and will soon be blown in.

Decatur—Light and Power Plant.—The Decatur Light & Power Co. has been reorganized and the new company has purchased the electric-light plant of the General Electric Co. of New York, and will operate both the old gas plant and the electric-light plant. The two companies represent an investment of \$100,000. Extensive improvements are contemplated. T. H. Harris will probably be manager.

Eufaula—Cotton Mill.—The Eufaula Cotton Mills contemplates doubling the capacity of its mill; present equipment 10,480 spindles and 321 looms; Capt. John W. Tullis, president.

Florence—Water-power Development, Electric Plant, etc.—D. L. Foster of Huntsville, who will form the Florence Light & Power Co., has purchased the water privileges of Cypress creek, near Florence, together with thirty acres of land, and will begin at once the erection of an electric-light and power plant; 1500 horse-power will be available by water development. The plant will cost \$55,000 when completed.*

Florence—Water Works.—The Florence Water Co. will extend its mains to East Florence at a cost of \$2000.

Huntsville—Bottling Works.—George Henry has established bottling works to employ twenty operatives.

Mobile—Barrel Factory.—The Hercules Ventilated Barrel Co. has established a barrel factory, with a capacity of 1000 per day; M. T. Marx, manager, and George D. Hulbert, superintendent.

Mobile—Barrel Factory.—The Hercules Ventilated Barrel Co., 25 S. Commerce street, will put in two more machines to increase capacity by 1000 barrels.

Oxford—Cotton-oil Mill.—J. F. Smith is president; D. W. Henderson, vice-president; D. C. Cooper, secretary-treasurer, of the Oxford Oil Co., reported during the week as incorporated with a capital stock of \$15,000.

Sheffield—Rolling Mill and Cooperage.—The Sheffield Rolling Mill Co. has its plant in full operation, manufacturing rolled iron; the spike machines are running to full capacity, turning out sixty kegs per day; cooperage department has been added.

Union Springs—Laundry.—Ira D. Oliver contemplates establishing a steam laundry.*

ARKANSAS.

Clarendon—Telephone Company.—The Clarendon Telephone Co. has been incorporated, with J. S. Thomas, president; M. J. Manning, vice-president; J. P. Lee, secretary-treasurer; capital stock \$4000.

Corning—Lumber Company.—The Black & Walk Store Lumber Co. has been incorporated by J. W. Black, Joe Walk and J. M. Lindsey with a capital stock of \$8000.

Dermott—Gin.—R. L. Woolfolk, E. R. Woolfolk and F. C. Polndexter have incorporated the Dermott Gin Co., with a capital stock of \$8000.

Forrest City—Oil Mill.—The Consumers' Cotton Oil Co., Swift & Morris of Chicago, proprietors, will erect an oil mill in Forrest City.

Hot Springs—Flour Mill.—R. L. Williams and Joe Brooks have contract for machinery for a 40-barrel roller flour mill.

Red Leaf Plantation (not a postoffice).—J. I. Hardie, Sons & Co., Thomas G. Hardie, Henry M. Hardie, Victor G. Bernard and others have incorporated at Little Rock the Red Leaf Co. to conduct a general cotton-ginning and manufacturing business.

FLORIDA.

Floral City—Phosphate Plant.—William Ross and I. N. Hugete are erecting a phosphate plant.

Jacksonville—Saw Mills, Dry-kilns, Planing Mills, etc.—Edward E. Fitzgerald has prepared plans for the buildings of the Cummer Lumber Co., reported last week; the plant will have a daily capacity of 125,000 feet of lumber and will have 1000 horse-power.

GEORGIA.

Americus—Cotton Compress.—Arrangements have been completed for the erection of a \$30,000 cotton compress. Names of interested parties will be announced later.

Atlanta—Chemical Laboratory.—N. P. Pratt, lately reported as erecting extensive additions to his laboratory, will, with A. W. Pratt and George L. Pratt, incorporate as the N. P. Pratt Laboratory.

Brunswick—Cannery.—R. W. Bellinger of Chicago, Ill., will establish a plant in Brunswick to condense and can oysters and shrimp.

Cedartown—Bleachery.—The Wahneta Knitting Mills will enlarge its mill at a cost of \$20,000 and employ sixty additional operatives; among the improvements will be a bleachery.

Covington—Electric-light Plant.—W. C. Clark and others have formed the Newton County Electric Light & Power Co., with a capital stock of \$30,000, for the erection of the electric-light plant lately reported; water-power will be used, twelve miles from Covington, which will be conveyed by overhead wire; 200 horse-power will be used; 75 to 100 horse-power will be used for lighting and 100 to 125 for running machinery.

Dalton—Flour Mill.—E. O. Herndon will convert a brick warehouse into a flour mill, with capacity of seventy-five barrels per day; machinery has been contracted for.

Forsyth—Knitting Mill.—The building formerly occupied by the Forsyth Manufacturing Co. is being remodeled and improved, and will be equipped with machinery for

knitting mill by C. A. Ensign, J. W. Newton and R. P. Brooks, who will incorporate a company to operate it. Rope, backbands, horse-collars, pads, etc., will be manufactured.

Griffin—Ice Factory and Creamery.—John Wallace and H. J. Wing of Spalding county, Georgia; George E. Clarke and Howard V. Robinson of Algona, Iowa, have incorporated the Dixie Creamery Co. for the establishment of the creamery recently noted. The company will also build an ice factory and cold-storage plant.

Macon—Wagon Factory.—Lawson Brown has secured building and will equip it with machinery for manufacturing wagons and buggies; capacity 1500 per year; number of operatives to be employed about thirty.

Macon—Water-power Development.—The Ocmulgee Electric Light & Power Co. has been incorporated for the development of the water-power of the Ocmulgee river, a few miles above Macon. Address Capt. I. B. English.

Macon—Underwear Factory.—An underwear factory will be established. Address for particulars Clarence Weeks of the Chamber of Commerce.

McDonough—Telephone Exchange.—Dr. J. E. Woods is constructing a telephone exchange, as recently reported. Address for particulars C. E. McKibben, manager.*

Milledgeville—Cotton Gin.—S. Barrett will rebuild his ginery lately burned.

Newnan—Flour Mills.—The Newnan Roller Flouring Mills has contracted for machinery to double the capacity of its mill; present capacity 350 bushels of wheat per day.

Newnan—Cotton Mill.—The Newnan Cotton Mills (lately reported) will enlarge its mill, but has made no definite arrangements as yet for doing so; it contemplates putting in 10,000 additional spindles and will erect an additional warehouse.*

Rome—Iron Furnace.—The Rome Iron Co. (lately reported) will put its furnace in blast about May 1; L. S. Colyar, president and general manager.

West Point—Cotton Mills.—The Riverdale Cotton Mills, L. Lanier, vice-president (lately reported), succeeds the Galtion Cotton Mills, as was stated. The mill has 6000 spindles and 160 looms, and will increase to 12,000 spindles; machinery not yet contracted for. Company has contracted for picker, opening and lapper room, clothroom, office and four warehouses for cloth and cotton.*

West Point—Brick Works.—Lafayette Jones has established brick works.

Wrightsville—Knitting Mill.—A stock company is being organized for the erection of a knitting mill.

KENTUCKY.

Covington—Tile Factory.—The Cambridge Tile Manufacturing Co. has increased its capital stock from \$50,000 to \$250,000, and is having plans made for a large tile factory.*

Oakgrove—Canning Factories.—Smith Bros. and W. G. Swann will each establish a canning factory.

Waco—Brick and Tile Factory.—C. L. Searcy will install a steam brick and tile outfit, as lately reported; is also erecting new kilns, and will enlarge his plant throughout and erect a new dryhouse.*

LOUISIANA.

Alexandria—Saw Mill.—The Georgetown Lumber Co., Limited, has been incorporated, with S. R. Lee, president; W. C. Beall, vice-president, and J. A. O'Shee, secretary-treasurer; capital stock \$30,000. The company operates a saw mill at Georgetown, with a daily capacity of 50,000 feet, which it will enlarge for the development of \$24,000 worth of timber lands recently purchased.

Lake Charles—Refrigerating Plant, Electric-light Plant, etc.—H. B. Milligan (previously reported as having closed contract for the erection of a 35-ton refrigerating plant and as to secure franchise for the installation of an electric-light plant) has, with W. D. Stone and Robert R. Stone, incorporated the Consumers' Ice, Storage & Provision Co., Limited, with a capital stock of \$20,000.

MARYLAND.

Baltimore—Canopy Factory.—The National Canopy Co. has been incorporated for the manufacture of bed canopies by Robert W. Ivy and William L. Gallant of North Carolina, James Sherley Smith of West Virginia,

Michael A. McCormick, Marion A. Frazier and Michael Mullin of Baltimore; capital stock \$25,000.

Baltimore—Cotton Mills.—Plans have been completed for the erection of an additional one-story building to the engine-house of the Clipper Mills at Woodberry for the purpose of accommodating a new 1200-horse-power engine.

Baltimore—Veneer Works.—D. W. Williamson & Co. of Indianapolis, Ind., are erecting a frame and brick veneer factory 80x100 feet at Highlandtown which will contain the latest machinery for cutting veneers; 100 operatives will be employed.

Berlin—Shirt Factory.—Dirickson Bros. have purchased building and installed twenty-five machines for the manufacture of shirts; building has a capacity for sixty machines. Address Dr. E. J. Dirickson.

Cumberland—Bridge.—The Baltimore & Ohio and the West Virginia Central & Pittsburgh railroad companies have had surveys made and plans perfected for the proposed new double-track bridge over the Potomac river at Cumberland; F. D. Underwood, general manager, Baltimore.

Easton—Woodworking Factory.—Plans are being prepared for the woodworking establishment to be erected at Easton by R. Herbert Martin of 2223 Maryland avenue, Baltimore, as recently reported. The plant will consist of two main buildings 50x150 and 50x200 feet, and three small buildings, besides an engine and boiler house; a boxmaking department will also be operated; fifty operatives will be employed.

Frederick—Brewery and Ice Factory.—Frank Bowman and John M. Goeller of Baltimore have purchased the old Page foundry at Frederick and will convert it into a brewery and ice factory.

Glyndon—Saw Mill.—William Leas of East Berlin, Pa., will establish a saw mill at Glyndon.

Hagerstown—Brewery.—Martin Cesare of Latrobe, Pa., will erect brewery in Hagerstown, as reported last week.

Rockville—Canning Factory.—A \$7500 stock company will be organized for the erection of a canning factory. Address Rockville Business Men's Association.

Washington, D. C.—Electric-power Plant.—Frederick C. Stevens and his associates, who have lately purchased several street railroads in Washington, have bought the property of the Washington Gas Co. for about \$2,700,000. It is said to be the intention of the syndicate to supply electricity from one general plant.

Williamsport—Electric-light Plant and Water Works.—The city will erect at once its proposed electric-light plant and may grant franchise to C. E. Boland of Scranton, Pa., and J. Woods of Philadelphia, Pa., for the construction of a system of water works. Address "The Mayor."

MISSISSIPPI.

Gulfport—Lumber Mill.—T. D. Taylor is erecting a new and larger lumber mill; capacity of present mill 20,000 feet per day.

Hattiesburg—Electric-light Plant.—The Hattiesburg Lumber Co., W. W. Bostick and Wm. Dunbar, have incorporated the Hattiesburg Electric Light & Manufacturing Co., with a capital stock of \$50,000.

Meridian—Ice Factory and Refrigerating Plant.—The Eagle Cotton Oil Co. has purchased the plant of the Queen City Manufacturing Co. and will convert it into an ice and cold-storage plant; refrigerating capacity to be fifty tons and manufacturing twenty tons of ice per day. Contract for machinery has been awarded.

Tupelo—Cotton Mill.—Arrangements will soon be completed for the establishment of the cotton mill lately referred to. For information address Major John Triplett.

Tupelo—Cottonseed-oil Mill.—A \$30,000 company has been formed for the erection of a cottonseed-oil mill.

MISSOURI.

Bolivar—Canning Factory.—The Bolivar Canning Co. has been incorporated, with a capital stock of \$5000, by C. S. McKinney, A. H. Lewis, R. B. Vites and others.

De Soto—Lead Mines.—The De Soto Lead Co. (recently reported as incorporated) will contract at once for the development of 10,000 acres of lead and mineral lands; C. A. Stocking, president and manager.

Joplin—Lead and Zinc Mines.—George B. Wood, T. K. Wood and Samuel Morrow of

Carthage and Frank West of West Virginia will erect a \$25,000 mill for the development of lead and zinc mines recently leased.

Joplin—Mining.—The American Zinc, Lead & Smelting Co. of Maine has been incorporated, with a capital stock of \$500,000, to operate in Joplin.

Joplin—Mining.—C. H. Wilcox, J. E. Jenkins, C. W. McAbee and others have incorporated the Marguerette Mining & Leasing Co., with a capital stock of \$25,000.

Kansas City—Commission Company.—The Harroun Commission Co. has been incorporated, with a capital stock of \$5000, by William H. Harroun of St. Joseph and others.

Kansas City—Commission Company.—William H. Harroun, H. A. Birmingham, John S. Smith and others have incorporated the Harroun Commission Co. with a capital stock of \$5000.

Sarcoile—Mineral Lands.—The Baker Mining Co. has been organized, with Joe Baker, president, for the development of mineral lands.

St. Louis—Electrical Works.—The Scott Manufacturing Co., lately reported as incorporated, has been formed for the purpose of manufacturing electric storage batteries for all purposes; plant consists of a three-story building 50x100 feet, to be equipped with \$3000 worth of machinery and employ about 200 operatives; A. D. Scott, general manager.

St. Louis—Shoe Factory.—The Brown Shoe Co. has awarded contracts for the erection of a six-story 101x150-foot shoe factory, to be of brick, with gray-stone trimmings and to cost, when completed, about \$100,000; capacity 8000 complete pairs of shoes per day; number of operatives employed about 1200.

St. Louis—Foundry.—Charles C. Hunleth, Frank J. Hunleth and Gustav J. Hunleth have incorporated the Standard Pulley & Foundry Co., with a capital stock of \$20,000.

St. Louis—Manufacturing.—N. R. Baker, S. F. Baker and Louis W. Padberg have incorporated the Baker Manufacturing Co. with a capital stock of \$5000.

St. Louis—Motor Company.—The St. Louis Motor Carriage Co. has been incorporated, with a capital stock of \$30,000, by Jesse French, John L. French, G. P. Dorris and others.

St. Louis.—S. E. Freund's Sons Shoe & Clothing Co. has been incorporated by Emma Freund, Harry Freund and Alfred Freund; capital stock \$50,000.

St. Louis—Printing, etc.—Nestor R. Baker, S. F. Baker and Lewis S. Padberg have incorporated the Baker Manufacturing Co. to conduct a general printing business; capital stock \$5000.

NORTH CAROLINA.

Albemarle—Knitting Mill.—Laubach & Butz are investigating with a view of establishing a knitting mill with a capacity of 150 dozen hose per day. Address care of Wiscasset Mills.

Charlotte—Gold Mines.—The syndicate lately reported as to develop gold mines near Charlotte will be known as the Ames Gold Mining Syndicate, William D. Rock of Richmond, Va., trustee, and C. A. Ames of Salt Lake City, Utah, general manager. The syndicate has secured a working lease and bond upon four separate mining tracts covering about 100 acres and has commenced operations. Address Mr. Ames at Room 1, Hunt Building, Charlotte.

Charlotte—Cotton Compress.—The Southern Railway Co. will erect a cotton compress at Charlotte to replace the plant recently burned; new press will be 30-inch, 2000-ton, steam-lever equipment, and, with other improvements, will cost about \$50,000; Frank S. Gannon, general manager, Washington, D. C.

Concord—Cotton Mill.—The Cannon Manufacturing Co.'s new mill (lately reported) will be 78x188 feet, part two stories and part three stories high; 7000 spindles and 375 looms will be installed.

Concord—Cotton Mill.—E. C. Barnhardt is president, and Joseph F. Cannon, secretary-treasurer, of the Bala Cotton Mills, reported last week as incorporated, to operate the Patterson mills; 1000 new spindles are being installed.

Durham—Mercantile and Manufacturing.—P. H. Smith and R. B. Fitzgerald of Durham, and D. A. Lane of Washington (all colored) have incorporated the Durham Real Estate, Mercantile & Manufacturing Co., with a capital stock of \$20,000.

Durham—Saw Mill.—W. B. Hampton has established a saw mill.

Elkin—Woolen Mill.—The Chatham Manufacturing Co. is doubling the capacity of its mill, necessary machinery having been purchased.

Fayetteville—Hosiery Mill.—It is reported that M. L. Morgan of the Laurel Hill (N. C.) Cotton Mills and others will purchase the Beaver Creek and Bluff Mill, near Fayetteville, and convert it into a hosiery-yarn mill; it contains at present an equipment of 3800 spindles and seventy-five looms.

Goldsboro—Cotton Mills.—The Robbin Manufacturing Co. has been incorporated, with a capital stock of \$12,000, for the manufacture of cotton and woolen fabrics, by Henry Well and others.

Greensboro—Iron Furnace.—The Empire Steel & Iron Co., which recently organized and purchased the furnace at Greensboro, is now improving same and expects to blow it in about May 6. A new stove is being installed and extra blowing capacity put in to increase daily capacity from 125 to 155 tons. Company's office is at 71 Broadway, Empire Building, New York city. Address care of Rogers, Brown & Co.

Jerusalem—Cotton Mill.—The Cooleme Cotton Mills (lately reported as to be established) has awarded contract to Willard & Hampton of Spartanburg, S. C., for the construction of a dam 477 feet long and ten feet high, and for the erection of main factory building 422x104 feet; 25,000 spindles and 800 looms will be installed. B. Frank Mebane of Greensboro, N. C., is heading this mill.

Laurel Hill—Cotton Mill.—The Ida Yarn Mill has completed a 50-foot addition and will install additional carding and spinning machinery.

Marshall—Water-power Development, Cotton Mill, etc.—Charles A. Reynolds of Winston and others are considering plans which include the development of the power of Ivy creek, near Marshall, and the furnishing of electric-power for Asheville and such industries as may be established by the promoters. It is also understood that a large cotton mill at Marshall is contemplated.

Mount Pleasant—Gold Mines.—J. A. Lackey, H. C. Connelly and J. A. Perry are reported as developing the Granny Brannen gold mine near Mount Pleasant.

New London—Water-power-Electrical Developments.—The North Carolina Power Co. (recently reported as incorporated with capital stock of \$5,000,000, etc.) plans the early commencement of work on its proposed water-power developments near New London. The company owns about 4000 acres of land on both sides of the Yadkin river, where the power is to be obtained and in dry seasons it is estimated 40,000 horsepower is available, which can be readily largely increased by the construction of storage reservoirs. Definite arrangements have been completed for the development of the water-power and the erection of electric plant to transmit the power for manufacturing and other uses. Messrs. J. G. White & Co. (Inc.) of 29 Broadway, New York city, will be the engineers of the work, and their Baltimore (Md.) representative, C. G. Young of 206 Equitable Building, has visited the property within the past week to make preliminary investigations. The Manufacturers' Record is reliably informed that the financial arrangements for this important project have been completed; also proposed is the erection of a large cotton mill. E. B. C. Hambley of Salisbury, N. C., is president of the company.

Roxboro—Pants Factory.—The Noel Bros. Pants Co. (reported last week) has established a new factory and expects to double its output.

Winston—Lumber Company.—The Granite Mountain Hardwood Co., lately reported as incorporated, will cut hardwood lumber and dimension stock on its timber lands along the base of the Blue Ridge mountains; G. W. Hinshaw, president.

SOUTH CAROLINA.

Catechee—Cotton Mills.—The Norris Cotton Mills will install 156 new looms and make other improvements that will double its capacity; tenements, belt holes and electric lights are being planned; the power plant is being overhauled and other necessary arrangements being made preparatory to starting the machinery; S. B. Shipp, superintendent.

Florence—Stemmy.—The American Tobacco Co. of New York will erect a stemmy in Florence.

Florence—Stemmy.—The Gorman-Wright Company will double the capacity of its stemmy.

Greenville—Cotton Mill.—The Mills Manufacturing Co. will put in an increase of 20,000 spindles; present equipment 8040 spindles and 250 looms; W. B. Moore, manager.

Greenville—Cotton Mills.—The Huguenot Mills will improve at a cost of not less than

\$30,000; present equipment 3000 spindles and 230 looms; G. R. Brisbee, superintendent.

Hartsville—Novelty Works.—The Southern Novelty Co. has been incorporated by J. L. Coker, J. L. Coker, Jr., J. J. Lawton and D. R. Coker for the manufacture of novelties; capital stock \$8000.

Hartsville—Electric-light and Power Company.—James L. Coker, Jr., and J. J. Lawton have incorporated the Hartsville Electric Light & Power Co., with a capital stock of \$2000.

Hartsville—Electric-light Plant.—The Hartsville Electric Light & Water Co. (reported last week as incorporated) will erect an electric-light plant; may construct water works later. Address James L. Coker, Jr.

Kershaw—Brick Works.—John T. Stevens, D. R. Fletcher and W. G. Adams have incorporated the Kershaw Brick & Manufacturing Co. to conduct a general brick-manufacturing business; capital \$1000.

McCormick—Cotton-oil Mill and Gin.—J. E. Britt, John J. Andrews, J. Q. Stilwell, M. L. B. Sturkey and J. B. Harmon have incorporated the McCormick Cotton Oil Co., with a capital stock of \$15,000, for the purpose of erecting a 20-ton cottonseed-oil mill and cotton ginnery.

St. Matthews—Flour and Cornmeal Mill.—Charles F. Zelgler and Benjamin D. Cain will erect a 25-barrel flour mill; a plant will also be put in for bolting cornmeal and complete machinery for hulling and grading rice.

TENNESSEE.

Brownsville—Water Works.—The city will hold an election on May 9 to decide the issuance of \$27,500 of bonds for the improvement and extension of the water-works plant. Address "The Mayor."

Chattanooga—Iron Foundry.—The Ross-Meehan Foundry Co. will put in new large blowing engine.

Chattanooga—Cotton Mill.—J. G. Vance proposes the organization of a company for the establishment of a cotton mill to employ 150 operatives, provided the citizens subscribe \$15,000.

Fayetteville—Laundry.—Tope & Silvertooth of Tallahoma, Tenn., are negotiating for the purchase of the Fayetteville Creamery; if purchased they will convert creamery into a laundry.

Jellico—Foundry and Machine Shop.—W. H. Crowe and others will erect a \$20,000 foundry and machine shop to employ about fifty operatives.

Knoxville—Furniture, etc., Factory.—The Utica Desk Co. of Utica, N. Y., has purchased the Graves Mantel Factory for \$40,000 and will remove its plant to Knoxville. The company will reorganize and incorporate under the laws of Tennessee, local capitalists investing \$100,000. G. S. Ballard is president of the present company.

Memphis—Sugar Refinery.—The Williams Sugar Refinery Co., lately reported as organized, will erect a sugar refinery with a capacity of 600 barrels per day; building will be 180x150 feet, with rail and river connections. Address E. B. Williams & Co., No. 339 Front street.

Nashville—Soda Works.—John Cudahy, J. T. Barrett, S. A. McLean, W. P. Wilkins, F. R. Burrows, W. J. Clemmens and W. E. Ammon have incorporated the Southern Soda Works, with a capital stock of \$600,000.

Nashville—Cotton Mill.—The Phoenix Cotton Mills has recently installed twelve cards and other necessary machinery; John L. Davidson, superintendent.

Puryear—Canning Factory.—J. G. Littleton contemplates establishing a canning factory.

Sparta—Shirt Factory.—Ionia (Mich.) parties are in correspondence with L. D. Hannan relative to the establishment of a shirt factory in Sparta to employ fifty operatives.

Sweetwater—Flour Mill.—W. H. Smith, James May, James M. Wilson, J. C. Friar and Fate Carter have completed arrangements for the establishment of a 100-barrel flour mill.

Tennessee—Copper Company.—The Tennessee Copper Co. has been incorporated at Trenton, N. J., for the development of copper and other mines; authorized capital \$5,000,000.

TEXAS.

Alvin—Telephone Exchange.—D. W. Lane of Galveston, representing the Viaduct Manufacturing Co. of Baltimore, Md., is investigating with a view of establishing a telephone exchange in Alvin.

Angleton—Irrigation Canal, etc.—Baker & Lewis of Lake Charles, La., will construct an irrigation canal at Angleton sixty feet wide and several miles long for the exten-

sive cultivation of rice lands; pumping plant will have capacity of 400,000 gallons per hour.

Aransas Pass—Land and Cattle Company. Chartered: The Southwestern Land & Cattle Co., with a capital stock of \$30,000, by B. H. Wilson, Nueces county; William Spessard, San Patricio county; E. A. Stevens, Aransas county, and others.

Austin—Oil Wells.—The Central Texas Oil Co. has been incorporated by Nelson Davis, I. Heldenheimer, W. H. Thaxton and Franz Fiset for the purpose of boring for oil, asphaltum and natural gas near Elgin and McDade, Texas; capital stock \$5000.

Dublin—Drug Company.—Chartered: The Overton Drug Co., with a capital stock of \$5000.

El Paso—Brick and Tile Company.—Chartered: The Vinton Brick & Tile Co., with a capital stock of \$20,000.

Mount Pleasant—Cotton-oil Mill, Ice Factory, etc.—T. B. Caldwell, C. C. Carr, C. L. Duncan and E. S. Lillienstern have incorporated the Farmers & Merchants' Cotton Manufacturing Co., with a capital stock of \$35,000, for the manufacture of cottonseed oil and ice.

Pittsburg—Mattress Factory.—H. D. Cunningham will erect a mattress factory 30x60 feet.

Rosebud—Water Supply.—Chartered: The Rosebud Water Supply Co., with a capital stock of \$10,000.

San Antonio—Machine and Supply Company.—Chartered: The San Antonio Machine & Supply Co., with a capital stock of \$50,000.

Silsbee—Lumber Mill.—The Industrial Lumber Co. is making extensive improvements to its mill.

Stephensville—Cotton Mill.—The Baldwin Gin Co. contemplates the erection of a cotton mill to manufacture 5000 yards of eight to ten-ounce duck per day.

Velasco—Box Factory.—The Armstrong Berry Box Co. has been organized for the manufacture of berry boxes out of paper and veneering.

Velasco—Corn Mill.—T. Shaw is erecting a corn mill.

VIRGINIA.

Blackstone—Electric Company.—Chartered: The Blackstone Electric Co., by J. M. Harris, George P. Adams, L. C. Tucker and others; capital stock \$3000.

Bridgewater—Flour Mill.—The Natural Falls Milling Co. has contracted for the necessary machinery for a 100-barrel flour mill.

Danville—Shirt and Overall Factory.—Harrison Robertson, Jr., will establish a shirt and overall factory to employ 100 operatives, to be operated by electric power.

Danville—Tobacco Factory.—Dibrell Bros. contemplate making some additions to their tobacco factory.

Grapelawn—Flour Mill.—J. H. Wood will erect a flour mill, as lately reported; machinery contracted for.

Lynchburg—Cotton Mill.—The Lynchburg Cotton Mills Co. will make immediate arrangements for the awarding of all contracts to double its 22,000-spindle 726-loom mill, as was recently reported had been decided upon. Company will erect weaveshed 367x128 feet, in which to place all its looms; also an engine-room 80x40 feet and a boiler-room 52x46 feet, and will place additional boilers of 800 horse-power. Plans and specifications will be ready in a few weeks. About \$400,000 will be expended; Max Guggenheimer, Jr., president.

Newport News—Piers.—The Old Dominion Land Co. will construct two new piers for the accommodation of small vessels. Address Superintendent Manville.

Norfolk—Corn-meal Mill.—Efforts are being made for the organization of a company to erect a mill for the manufacture of corn meal by an improved and recently patented process. Address B. F. Batchelder for further information.

Norfolk—Ice and Refrigerating Plant.—J. H. Allen has contracted for a two-ton ice-making plant, with an additional capacity of three tons of refrigeration (as lately reported), to be operated in connection with his dairy; forty operatives employed.

Norfolk—Saw Mills, etc.—The Atlantic Coast Lumber Co. has been incorporated, with Lewis A. Hall of Bay Mills, Mich., president; Edward B. Freeman of Norfolk, Va., vice-president and general manager; Charles S. Fearing of New York city, treasurer; Robert L. Montague of Norfolk, Va., secretary, to build mills and wharves, conduct stores and operate lines of ships and barges. The company has acquired 600,000,000 feet of standing timber on the Atlantic

coast between Norfolk and Charleston, S. C., which will be cut at mills to be erected along the coast. Operations will begin at once.

Ocran—Fertilizer Factory.—Bellows & Squires are adding new machinery to their fish fertilizer factory.

Radford—Telephone System.—The Pulaski Telephone & Telegraph Co. of Pulaski City will establish a telephone system in Radford.

Richmond—Coal Mines, Coke Ovens, etc.—The Richmond Standard Steel, Spike & Iron Co. has been incorporated for the purpose of mining coal, manufacturing coke, pig iron, steel, railroad spikes, etc., with J. Fred Pearson, Jr., of New York, president; Corbin Warwick of Richmond, vice-president; George M. Bailey of New York, secretary, and William H. Llewellyn of New York, treasurer; capital stock \$2,000,000.

Richmond—Brewery.—The Home Brewing Co. has been incorporated, with a capital stock of \$200,000, to succeed the Peter Stumpf Brewing Co.; incorporators, F. Stierding, George C. Guvernator, F. Will and others.

Richmond—Acetylene-gas Machine Works. The United Acetylene Companies, lately reported as incorporated for the manufacture of machines for generating acetylene gas, etc., will construct a complete plant for its business in all branches; plant will cost \$50,000 and employ about fifty operatives.

Richmond—Electrical Works.—The Tower-Binford Electric & Manufacturing Co. (reported last week as incorporated) will have a thoroughly equipped factory for the manufacture and repair of all kinds of electrical apparatus, such as fans, generators, motors, etc. Address 701 and 704 East Main street.

Richmond—Manufacturing, etc.—The Manchester Land & Manufacturing Co. has been incorporated, with William L. Royall, president; Matthew Gilmour, secretary, and William H. Allison, treasurer, for the purpose of acquiring real estate, erecting factories, etc. The capital stock is to be not less than \$9000 nor more than \$25,000.

Schuyler—Electric Plant.—Virginia Soapstone Co. will put in an electric plant, with generators for about 200 horse-power or more.*

WEST VIRGINIA.

Bluefield—Electric Company.—W. A. Cather, Edwin Mann, W. P. Hawley, G. A. Shirey and R. E. Johnson are among the incorporators of the East River Electrical Co., reported during the week as incorporated for the manufacture of electrical dynamos; capital stock \$15,000. The company will make an offer for the purchase of the electric-light plant already established, and if not successful in buying will erect a plant. Address Edwin Mann.

Charleston—Oil Wells.—Judge P. S. Grosscup of Chicago, F. E. Myers, P. A. Myers and E. J. Grosscup of Ashland, O., and Fred P. Grosscup and W. S. Lewis of Charleston will organize a company for the development of 7000 acres of oil land in Boone county.

Charlestown—Telephone Extension.—The city has granted franchise to the Winchester Telephone Co. for the construction of a telephone system.

Charleston—Power Company.—Henry A. Gardner and James P. Gardner of Chicago, Ill.; A. S. Cooke, Pittsburg, Pa., and Howard S. Johnson of Charleston, W. Va., have incorporated the Kanawha Power Co. for generating power by steam and electricity; authorized capital \$100,000.

Christiansburg—Electric-light Plant and Water Works.—The electric-light plant and water works mentioned last week will be constructed by the Unique Power, Light & Water Co., which will issue \$10,000 of bonds for the purpose; James Rigby, president.

Farmum—Coal, Oil and Gas Development.—R. W. Affleck, J. H. McConanhey, R. W. McCoy, C. E. Ellis and H. C. Wood, all of Columbus, O., have incorporated the Globe Coal & Coke Co., to mine and produce coal, coke, clay, oil, gas and other minerals; authorized capital \$100,000.

Kingwood—Chair Factory.—D. L. Helman of Warren, O., member of the firm of W. C. Styles, manufacturer of chair stock, is investigating with a view of removing his plant to Kingwood; if the factory is removed about forty operatives will be employed.

Moundsville—Electric-light Plant.—An electric-light plant will be installed at the West Virginia Penitentiary at a cost of \$6000; E. E. Reese, electrical engineer.*

Point Pleasant—Water Works.—William Steenbergen of Point Pleasant and A. L. White of Wheeling will organize a company for the construction of a system of water works.

Ronceverte—Coal Mine.—John M. Abbot is making developments of coal on his property. A four-foot vein of anthracite is said to be uncovered.

Winifrede—Coal Mines, Coke Ovens, etc. The Big Kanawha Towboat Co. has been incorporated for the purpose of mining coal, manufacturing coke and conducting a general boating and towing business, by Thos. E. Baird, D. W. Chandler of Philadelphia, Pa.; R. B. Cassidy, Charleston, W. Va.; J. W. Johnson, J. H. Parkers and C. A. Johnson, Proctorville, Ohio; capital stock \$7000.

Womelsdorff—Coal Company.—Elwood Thorn, Samuel B. Diller, Thomas Covington of New York; John Wehrle and V. T. Black of Charleston, W. Va., have incorporated the West Virginia Railroad & Coal Co., with a capital stock of \$300,000.

BURNED.

Nashville, Tenn.—Mill "A" of the Cumberland Flour Mills Co.; estimated loss \$150,000.

Norfolk, Va.—The plant of the Imperial Fertilizer Co.; estimated loss \$20,000.

Richmond, Va.—The Try-Angle Cigar & Cherooff Co.'s factory; estimated loss \$12,000.

BUILDING NOTES.

Baltimore, Md.—Bank Building.—The Metropolitan Savings Bank, reported during the week as having purchased the Robinson Building and to erect a modern bank and office building, has not as yet made any plans for the improvement of the property; C. C. Shriver, president.

Baltimore, Md.—Dwelling.—Rev. James A. Cunningham will erect a stone and brick parsonage to cost \$10,000.

Baltimore, Md.—Clubhouse.—J. Evans Sperry has completed plans for the \$20,000 frame and stone clubhouse of the Maryland Bicycle Club.

Baltimore, Md.—Cottages.—Clymer Whyte, with the co-operation of the Roland Park Company, will erect several cottages at Roland Park to cost about \$50,000; Wyatt & Nolting are the architects.

Baltimore, Md.—Church.—The congregation of Faith English Reformed Church has decided to erect a new church of granite. Address Rev. A. S. Weber, pastor.

Brownsville, Tenn.—School.—The city will hold an election May 9 to decide \$12,500 of bonds for the erection of a school. Address "The Mayor."

Cameron, S. C.—Tobacco Warehouse.—The Cameron Tobacco Warehouse Co. has been formed for the erection of a tobacco warehouse 70x100 feet, to be of the latest plans and style. Address George D. Dantzler, secretary.*

Cedartown, Ga.—Dwellings.—The Cedar-town Company will erect twelve dwellings for operatives.

Charlotte, N. C.—Office Building.—The Charlotte Consolidated Construction Co., E. D. Latta, president, contemplates the erection of a six-story office building, granite front, to have all modern improvements and cost \$75,000.

Columbia, S. C.—Residence.—B. S. Whaley & Co. have prepared plans for a \$5000 dwelling for J. C. Moore.

Durham, N. C.—Depot.—The Norfolk & Western Railroad Co. has purchased site for \$33,000 and will erect a depot; J. M. Barr, general manager, Roanoke, Va.

Durham, N. C.—Passenger and Freight Depots.—The Norfolk & Western Railroad Co. will erect passenger and freight depot at Durham, as lately reported; J. M. Barrs, vice-president and general manager.

Gaffney, S. C.—Jail.—N. Lipscomb, county supervisor, will receive sealed bids until May 4 for the erection of a two-story brick jail and jailer's residence, jail department to be fireproof, according to plans and specifications now on file. Each bid must be accompanied by certified check for \$500. Usual rights reserved.

Georgetown, Ky.—Building.—Contract has been awarded to G. B. Glass at \$10,140 for the erection of the new city building.

Greenville, S. C.—Dwellings.—The Mills Manufacturing Co., W. B. Moore, manager, will erect tenement houses.

Harrisonburg, Va.—Barn.—G. C. Spitzer has received contract to erect a barn 60x140 feet for Gen. J. E. Roller.

Huntington, W. Va.—Hotel.—James S. Miller, 921 Eighth avenue, proprietor St. Charles Hotel, will rebuild at once his hotel, recently burned.

Jenifer, Ala.—Hotel.—The Ingram Lithia Water Co. has let contract for the erection of a two-story hotel of twenty rooms at Ingram's Lithia Wells. Address J. B. Gilmore, manager.

Jonesboro, Tenn.—Bank Building.—Charles Foreman of Knoxville is preparing plans for new bank building to be erected by the Jonesboro Banking & Trust Co. at Jonesboro.

Kansas City, Mo.—Apartment-house.—P. V. Rocco has had plans prepared by F. B. Hamilton for the erection of a four-story brick and cut-stone apartment-house 48x88 feet, to cost \$30,000.

Kansas City, Mo.—Dwellings.—A. I. Smith will erect an \$8000 residence and a \$10,000 flats building, plans prepared by J. C. Williams; E. L. Massie is having plans made for a \$10,000 dwelling; Oliver Parlat will erect a dwelling; T. J. Woodling will erect a \$10,000 dwelling; Dr. Carl Feld will erect a one-story brick business building to cost \$6000, and will expend \$5000 in improvements to a three-story building; L. G. Middaugh has prepared plans for four dwellings to cost \$3000 for Mr. Mahoney.

Kansas City, Mo.—Office Building, Dwellings, etc.—The Standard Oil Co. has had plans prepared by H. J. Simons for a one-story brick 44x80 office building to cost \$10,000. Dr. Herman E. Pearce has had plans prepared by I. C. Schafer for an \$8000 brick dwelling 32x42 feet. J. G. Brecklin has made plans for flats to be erected by Mr. Terry at a cost of \$15,000; for a \$3500 residence for A. O. Thomson. Nicholas Miller has received contract to erect two houses at a cost of \$3400 each for J. G. Nitchy. George W. Herbold will erect a \$3000 residence.

Kershaw, S. C.—Church.—The Baptist congregation will erect a \$5000 brick church, as lately reported. Address Jabez Ferris, pastor.

Keyser, W. Va.—Hotel.—A company is being organized for the erection of a hotel. Names of interested parties will be announced later.

Lewisburg, Tenn.—Dwelling.—D. C. Landers will erect a dwelling.

Lynchburg, Va.—Warehouses.—The Lynchburg Cotton Mills Co. will contract for the erection of cotton houses; L. Lanier, president.

Macon, Ga.—Cotton Warehouse.—Jake Heard will erect a large cotton warehouse.

Macon, Ga.—Business Building.—Eades, Neel & Co. are having plans made for a three-story building, to be equipped with modern appliances, such as electric lights, electric elevators, steam heat, etc.*

Marble Hill, Mo.—Jail.—B. L. Bowman, jail commissioner, Bollinger county, Missouri, will receive sealed proposals until May 17 for building a two-story brick sheriff's residence and jail, with jailer's office, cellroom and four steel cells, not to exceed the sum of \$6000. Plans and specifications can be seen. Proposals must be accompanied by certified check for \$500. Usual rights reserved.

McKinney, Texas—Temple.—The Masonic Lodge will erect a brick temple 42x80 feet.

Memphis, Tenn.—Warehouse.—W. S. Bruce & Co. are erecting a four-story brick, steel and stone warehouse 175x125 feet.

Memphis, Tenn.—Terminals.—The Louisville & Nashville Railroad Co. will construct freight terminals and make other improvements at South Memphis. Address J. G. Metcalfe, general manager, Louisville, Ky.

Montezuma, Ga.—Jail.—The county commissioners have decided to erect a new jail. Address "County Clerk."

Nashville, Tenn.—Store and Office Building.—Norman Kirkman will erect a six-story store and office building to cost \$40,000.

Newnan, Ga.—Warehouse.—The Newnan Cotton Mills will erect an additional warehouse.

New Orleans, La.—Business Buildings.—Leon Fellman will erect a row of five-story steel and iron commercial buildings at a cost of about \$200,000.

Newport, Ky.—Dwelling.—John J. Perkins will build a \$5000 dwelling.

Newport News, Va.—Church.—The Episcopal congregation will erect a new church. Address "The Pastor."

Newport News, Va.—Business Building.—Winston & Co. of Chicago and Judge S. W. Sims of Louisa county have had plans prepared by P. Thornton Marye & Bro. for the erection of a four-story business building 100x90 feet, front to be of pressed brick and terra-cotta.

Norfolk, Va.—Business Building.—H. C. Hofhelmer has purchased site for \$11,600 and will erect a business building.

Oglethorpe—Jail.—Contracts for the erection of the proposed jail will be awarded on June 15. Plans and specifications are now on file in office of county commissioners. The building is to be of brick, two stories, slate roofing, concrete flooring, steel beams,

four toolproof cells, two other steels, etc. Address J. D. Frederick, chairman.

Pen-Mar, Md.—Hotel.—The Pen-Mar Land & Improvement Co. will make extensive improvements to its property, including the erection of a hotel; W. Riley Weaver of Baltimore, manager.

Pinehurst, N. C.—Hotel.—A large hotel will be erected. Address Mr. Tuft.

Rocky Mount, N. C.—Hall.—Corinthian Lodge No. 230, A. F. and A. M., has let contract for a three-story hall to cost \$11,000.

Rocky Mount, N. C.—Hospital.—The Atlantic Coast Line has let contract for the erection of a three-story 90x120-foot hospital for its employees; J. R. Kenly, general manager, Wilmington, N. C.

St. Louis, Mo.—Hotel.—Col. Ed Butler has had plans prepared for a hotel 70x150 feet and to contain 130 rooms.

St. Louis, Mo.—Dwellings.—Wilbur F. Boyle has awarded contract to A. H. Hasseler for a three-story, 21-room dwelling, 64x86 feet, to cost \$32,000. The same contractor has also received contract for the erection of a three-story, 21-room dwelling, 56x61 feet, to cost \$27,000, and for a \$5000 stable in connection with the dwelling.

Thomaston, Ga.—Hotel.—Plans are being prepared for rebuilding the Sandwich Hotel recently burned.

Waco, Texas—Orphanage.—The Methodists are having plans prepared for a \$10,000 orphanage.

Washington, D. C.—Station.—The Capital Traction Co. will erect a new passenger station.

Washington, D. C.—Buildings.—John O. Johnson will erect a four-story 63x145-foot brick building, with stone trimmings; plans have been prepared by T. F. Schneider for a three-story residence, with white marble front, for Emmons Smith.

Washington, D. C.—Buildings.—Site has been purchased for \$115,000 for the erection of Masonic Temple; address O. L. Pitney. The Dewey Hotel will be enlarged to double its capacity. Charles W. King will erect five stores and flat building, three stories, 95x64 feet, press-brick fronts, flat tin roof, hot-water heat, cost \$25,000. James Shea, four brick buildings, two-story, 16x32 feet, press-brick fronts, flat tin roofs, Latrobe heat, cost \$7000. Thomas E. Smithson, three two-story brick dwellings, 14x32 feet, red-brick fronts, flat tin roofs, Latrobe heat, cost \$4500. R. E. Middaugh, three two-story brick dwellings, 16x32 feet, press-brick fronts, flat tin roofs, furnace heat, cost \$7500. Meyers & Anderson, six two-story brick and stone dwellings, 18x45 feet, pitched tin roof, furnace heat, cost \$25,000. B. F. Harper, brick mill, 35x42 feet, press-brick front, flat roof, covered with tile and tin, steam heat, cost \$2500. George J. May, eight three-story dwellings, 18x37 feet, press-brick fronts, mansard roof, covered with slate and tin, steam heat, cost \$6000, and four dwellings, to be two stories, 18x31 feet, press-brick fronts, mansard roofs, furnace heat, cost \$23,500. Little Sisters of the Poor, front and rear additions; cost \$45,000. Mrs. Martha McWhirter, two three-story additions, hot-air heat, pitch slate roof, cost \$8000. David Moore, six two-story dwellings, 16x31 feet, press-brick front, mansard roof, covered with slate and tin, furnace heat, cost \$15,000. C. V. Mallet, five two-story brick dwellings, 16x32 feet, press-brick fronts, flat tin roofs, furnace heat, cost \$12,500.

West Point, Ga.—Warehouses.—The Riverdale Cotton Mills has let contracts for the erection of four warehouses.

Wilmington, N. C.—Business Building.—J. Hicks Bunting is having plans prepared for a three-story brick building 22x100 feet, front to be of pressed brick and French plate glass.

Wilmington, N. C.—Office Building.—J. Hicks Bunting writes that he will build an office and store building, three stories high, of brick.

Winchester, Tenn.—Hotel.—George W. Steagall will erect a 70-room brick hotel, to be lighted by electricity and have all modern conveniences.

RAILROAD CONSTRUCTION.

Railways.

Baltimore, Md.—The United Railway Co. It is announced, has determined to complete the trolley line to Ellicott City, Md., and to a point about four miles west of that town. William A. House is general manager of the company.

Beckley, W. Va.—Work has begun upon the railroad line to be constructed from Beckley to Prince Station, which will pass through coal and timber lands owned by

Northern parties. The new road will connect with the Chesapeake & Ohio at Prince Station and will run through a section of Raleigh county. It will be about twelve miles long.

Caldwell, W. Va.—A correspondent of the Manufacturers' Record writes that about five miles of the railroad along the Greenbrier valley have been let to contract, and that a section of fifty miles additional will be contracted for in a few days. The total length of this line will be about ninety miles, extending from Caldwell, where it terminates, on the Chesapeake & Ohio system, to the forks of the Greenbrier river.

Camden, S. C.—Right of way has been secured, it is stated, for most of the route of the proposed Seaboard Air Line extension between Cheraw and Camden. E. St. John, at Portsmouth, Va., is general manager of the company.

Caruthersville, Mo.—The company which proposes building a line in Pemiscot county has been incorporated in the State under the title of the St. Louis, Caruthersville & Memphis Railroad Co., with \$210,000 capital.

Clayton, Mo.—The Brentwood, Clayton & St. Louis Railway Co., recently formed with \$70,000 capital stock, it is understood, will construct a line between Brentwood and other towns in the suburbs of St. Louis. The directors include C. L. Caldwell.

Cranberry, N. C.—It is announced that Isaac T. Mann of Bramwell, W. Va., has purchased the unfinished Linville River Railroad and will complete it, as originally intended, from Cranberry to Pineola, on the Linville river, a distance of fourteen miles. It will be used for hauling lumber from a tract which Mr. Mann controls.

Columbia, S. C.—Surveys, it is reported, are being made for a railroad between Aiken and Columbia in the interest of the Seaboard Air Line. E. St. John at Portsmouth, Va., is general manager of the railroad company.

Dumas, Ark.—W. H. Heider writes the Manufacturers' Record that he intends constructing about ten miles of road for lumber purposes in Desha county, Arkansas, which will terminate at Dumas. Mr. Heider's present address is Louisville, Ky.

Elkton, Md.—The Lancaster, Cecil & Southern Railroad may possibly be extended from its present terminus to Lancaster, Pa. The road is a feeder of the Baltimore & Ohio.

Elk Valley, Tenn.—The Elk Valley Coal & Iron Co. will build an extension of railroad to its mining property which will be one and one-half miles long. J. S. Lindsay of Jacksboro, Tenn., may be addressed.

Farmville, Va.—There is a report current that the Farmville & Powhatan Railroad, which is now in operation from a point on the James river to Farmville, Va., will be extended to Manchester, a distance of thirteen miles, also further west to Roanoke. James R. Werth, at Richmond, is general manager of the company.

Frankfort, Ky.—It is reported that the Frankfort & Cincinnati Railroad, extending between Frankfort and Paris, Ky., a distance of forty-five miles, will be extended from Paris to Mount Sterling, also from Frankfort to Alton. It is understood that the extension will be built by a syndicate which has purchased it. H. P. Mason at Frankfort is president of the company at present.

Gulfport, Miss.—The latest report concerning the Gulf & Ship Island Railroad extension is to the effect that this line may be built direct to Jackson, Miss.; surveys are now being made. S. S. Bullis, at Gulfport, is president of the railroad company.

Hendersonville, N. C.—The Transylvania Railroad Co., recently incorporated with \$320,000 capital stock, will assume control of the Hendersonville & Brevard Railroad and extend it about ten miles, making the total length of the line thirty-two miles. W. P. Potter of Pittsburg, Pa., is president of the company, which also includes J. P. H. Cunningham of New Castle, in the same State, and J. F. Hayes of Sapphire, N. C.

Hope, Ark.—Ties have been purchased and arrangements are being made to grade an extension of the Central Arkansas Railroad from Hope to Stamps. A. P. Dyke is one of the principal promoters.

Jacksonville, Fla.—R. B. Daniel and E. C. Bixler of Jacksonville, Fla., have formed the Suwannee & San Pedro Railroad Co., to build a line in Suwannee county to the river of the same name. It will be about fifteen miles in length. The company is capitalized at \$50,000.

Knoxville, Tenn.—The Southern Railway Co., it is reported, is making surveys for an

extension about three miles long to a tannery to be built near Maryville, Tenn. Frank S. Gannon at Washington is vice-president of the company.

Lexington, Ky.—The report that the Lexington & Eastern Railroad may be extended has been revived. According to the last report, the extension will be built to a point near Jackson, its eastern terminus, into Clay county, reaching Booneville. J. R. Barr is general manager of the company at Lexington.

Lumberton, N. C.—J. H. McRee may be addressed until May 1 relative to the contracts for constructing twelve miles of the Carolina Northern Railroad on the route between Lumberton and Marion, S. C.

Marion, S. C.—Surveys are now being made along the route of the proposed Marlboro, Marion & Horry Railroad; its estimated length is ninety miles, and it will extend from Hamlet, N. C., to Bennettsville. A. J. Matheson, at Blenheim, S. C., is president of the company.

Middlesborough, Ky.—R. C. Ford, one of the promoters of the railroad from Middlesborough to a connection with the Southern system, informs the Manufacturers' Record that negotiations have been in progress with the Southern Railway and that the management of this company may investigate the advantages of such a line. It would extend through Belle, Clay, Jackson, Gardner and Mercer counties. J. S. Farra, at Lancaster, Ky., is among those interested.

Newberry, S. C.—The Whitmire, Newberry & Augusta Railroad Co. has determined to solicit subscriptions for its stock at once. James McIntosh, at Newberry, is chairman of the temporary organization. The proposed route is from Augusta, Ga., to Newberry and Whitmire, a total distance of eighty-two miles. It will connect with the Seaboard Air Line at the latter station.

New Orleans, La.—It is announced that the Texas & Pacific Railroad Co. has determined to make extensive improvements to several of its lines in Louisiana, which will include a large amount of reballasting. L. S. Thorne, at Dallas, is vice-president of the company.

New Orleans, La.—A company entitled the St. Louis & New Orleans Railroad Co. is advertising its charter. Among those reported as interested are William A. Percy of Memphis, Tenn., and Murray F. Smith of Vicksburg, Miss., and Charles J. Lewis of New Orleans. According to the company's statement it proposes building from New Orleans through Louisiana and Arkansas to a connection with some road entering St. Louis.

New Orleans, La.—S. V. Wardall of Ames, La., secretary of the Duluth & New Orleans Railroad Co., writes the Manufacturers' Record that H. C. Arnold is president, and H. A. Wardall, treasurer, of the company. He states that surveys are now being made from Des Moines to Iowa Falls, and that right of way has been secured. The company will use 80-pound steel rails to be sixty feet in length, and railroad contractors may address the company at Nevada, Iowa. It is intended to extend this line, according to Mr. Wardall, to a point on the Gulf of Mexico.

Pine Bluff, Ark.—E. S. McCarthy and others are agitating the plan to build a railroad from Pine Bluff through a portion of the Arkansas timber lands, which will be about twenty-five miles long.

Pine Bluff, Ark.—It is stated that arrangements are being made to extend the Pine Bluff & Arkansas River Railroad a distance of about ten miles beyond its present terminus. This road forms a portion of the St. Louis Southwestern system, of which Russell Harding of St. Louis is general manager.

Richmond, Va.—The management of the Seaboard Air Line announces that the section between Richmond and Ridgeway, N. C., is expected to be completed and ready for operation about December 1.

Salisbury, N. C.—Preliminary surveys have been made for the proposed railroad to extend from the power plant on the Yadkin river to the Southern system. John H. Ramsay, at Salisbury, may be addressed.

Sistersville, W. Va.—Another survey has been made for the proposed electric railroad between Sistersville and New Martinsville, a distance of eight miles. Brown & Hazlett are acting as engineers for the promoters; they may be addressed at Wheeling, W. Va.

Texarkana, Texas.—The Arkansas Valley & Gulf Railway Co. has been chartered with \$100,000 capital to build a road from Arkansas City through a portion of Oklahoma and Indian Territories to Texarkana. Fred D. Fuller and W. B. Lawrence of Topeka, Kan., are among the directors.

Tifton, Ga.—Surveys have been completed for the Tifton, Thomasville & Gulf Railroad between Tifton and Thomasville, and it is understood several of the contracts for grading have been let. The distance is about fifty miles. W. A. Heath is general manager. This road is to be built in the interest of the Union Lumber Co., and the headquarters of the engineer will be at Tifton. J. W. Hightower of Hawkinsville, Ga., is one of the promoters.

Valdosta, Ga.—The Atlantic, Valdosta & Western Railroad Co. has completed its line to a point fifteen miles from Valdosta, and tracklaying is progressing at such a rate that the line will be completed to this point within the next two weeks. E. C. Long at Jacksonville, Fla., is vice-president of the company.

Versailles, Mo.—Surveys are being made by a company which proposes building from Versailles to Union, Mo., a distance of about 120 miles. The company is entitled the St. Louis, Kansas City & Colorado.

Washington, D. C.—T. William Harris has been elected president; B. G. Bolleau, vice-president, and Henry W. Williams, secretary, of the Washington & Gettysburg Railway, which purposes extending the Baltimore & Washington Transit Co.'s line from its present terminus to Gettysburg. Messrs. Bolleau and Williams are from Baltimore.

Welch, W. Va.—The Tug River & Elk Fork Railroad Co. has been formed to build a railroad line from Welch to a point in McDowell county, on the Tug river. The road may be eventually extended to Pocahontas, Va. The company is capitalized at \$30,000, and includes C. L. Rider of Welch and E. M. Watts of Huntington, W. Va.

Womelsdorf, W. Va.—The West Virginia Railroad & Coal Co. is a new corporation, capitalized at \$300,000, for the purpose of building a railroad in Randolph county. The company includes V. T. Black and John Wehrle of Charleston, W. Va.

Street Railways.

Greenville, S. C.—A. F. Gates of Atlanta, Ga., one of the parties interested in the proposed electric railway, writes the Manufacturers' Record that no decision about building this road has been reached as yet. Mr. Gates is interested in the General Electric Co. at Atlanta.

Paris, Tenn.—The company which proposes building the street railway in Paris has been chartered, with \$100,000 capital. It is entitled the Paris Electric Street Railway, and among those interested are John C. Sweeney and W. A. Carter.

Petersburg, Va.—Material for the railway to be built by the Petersburg Traction Co. has arrived, and it is expected to complete the line within a few weeks. R. L. Williams at Richmond may be addressed.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Air Compressor.—Warrior Iron Works, C. J. Goehagan, manager, Birmingham, Ala., is in the market for an air compressor having air cylinders of about 24-inch diameter; wants size, weight, length of time used, maker's name and shipping point.

Bleachery.—See "Cotton-mill Machinery." Boiler and Engine.—See "Electrical Machinery."

Boiler and Engine.—Dibrell Bros., Danville, Va., are in need of a 100-horse-power boiler and a 50-horse-power engine.

Boilers.—See "Mining and Milling Equipment."

Boilers.—C. R. Hunter, Montgomery, Ala., wants prices and catalogues on 250-horse-power water-tube boilers.

Boilers and Engines.—S. H. Griswold, Fourth street, J. T. Moore's Warehouse, Macon, Ga., wants prices on second-hand engines and boilers.

Brick and Tile Machinery.—C. L. Searcy, Waco, Ky., wants to purchase outfit for dryhouse.

Building Materials.—Eades, Neel & Co., Macon, Ga., want to correspond with manufacturers of building materials.

Building Materials.—Cordele Sash, Door & Lumber Co., Cordele, Ga., is in the market for lime, brick and cement in carload lots; prices f. o. b. Cordele.

Building Materials.—H. C. McCamant, Belen, New Mexico, wants flour-mill machinery, patent roofing, carpenter foot-power machinery and everything in the building line.

Cannery.—See "Starch Machinery" and "Evaporating Apparatus."

Canning Machinery.—J. G. Littleton, Puryear, Tenn., wants to correspond with manufacturers of canning machinery.

Corn-mill Bolting.—See "Wire."

Cotton Ginners.—See "Oil Mill and Ginners."

Cotton Mill.—See "Textile Machinery."

Cotton-mill Machinery.—S. C. D., care of Manufacturers' Record, Baltimore, Md., wants estimates on 5000 spindles.

Cotton-mill Machinery.—Riverdale Cotton Mills, L. Lanier, vice-president, West Point, Ga., will purchase 6000 spindles, etc.

Cotton-mill Machinery.—Parker Mills, Seth A. Borden, treasurer, Fall River, Mass., will purchase machinery for cotton mill; building three-story, 267x148 feet, to be erected in Warren.

Cotton-mill Machinery.—Newnan Cotton Mills, Newnan, Ga., is in the market for a dyeing machine and dryer.

Cotton-mill Machinery.—Cedartown Company, Cedartown, Ga., wants bids and information in regard to bleachery and dye-house plants, and especially information in regard to mercerizing cotton.

Crushers.—Dingee, Weinman & Co., Lynchburg, Va., are in the market for two second-hand crushers (Blake pattern), one 4x7½x8 and one a little longer.

Dam.—See "Mining and Milling Equipment."

Dam.—See "Electrical Machinery."

Dyeing Equipment.—See "Cotton-mill Machinery."

Dyeing and Drying Machinery.—See "Cotton-mill Machinery."

Electrical Machinery.—Florence Light & Power Co., Huntsville, Ala., wants prices on water wheels, electrical plant, construction of dam (across creek), etc.

Electrical Machinery.—Eades, Neel & Co., Macon, Ga., want to purchase electric-lighting plant, electric elevators, steam-heating apparatus, etc., for three-story building.

Electrical Machinery.—Weedsport Electric Light Co., Weedsport, N. Y., wants to purchase one 80-horse-power boiler, one 80 to 120-horse-power high-speed engine, one 50 to 60-kilowatt alternator from 500 to 800 feet transformer capacity.

Electric Plant.—Virginia Soapstone Co., Schuyler, Va., wants an electric plant, with generators for about 200 horse-power or more, and motors to run machinery; also a light trolley car for hauling output four miles; will also purchase one or two light trolley cars or trucks equipped for electric power.

Electric-light Plant.—See "Electrical Machinery."

Electric-light Plant.—Consumers' Electrical Co., Wheeling, W. Va., will soon want bids for construction of a plant to cost \$100,000; S. W. Harper, president.

Electric-light Plant.—Bids are asked until May 9 for furnishing the materials for installing a plant at the West Virginia Penitentiary, Moundsville, W. Va., estimated cost \$6000. There will be wanted 1400 16-candle-power incandescent and ten arc lights; E. E. Reese, electrical engineer.

Electric-light Plant.—See "Water Works."

Electric-power Plant.—See "Textile Machinery."

Elevators.—See "Electrical Machinery."

Engines.—See "Mining Equipment."

Evaporating Apparatus.—A. B. Hurst, De Land, Fla., wants to buy fruit and vegetable drying apparatus.

Excelsior Machinery.—Cameron & Barkley Co., Charleston, S. C., wants to correspond with manufacturers of excelsior machinery.

Flour-mill Machinery.—See "Building Materials."

Foundry.—C. P. Cahill, Pine Hall, N. C., wants to purchase tools for making plows from sheet iron.

Foundry and Machinery Equipment.—W. H. Crowe, Jellico, Tenn., wants to purchase machinery for foundry and machine shop. Address Mr. Crowe, care of John B. Leath, mayor.

Foundry Equipment.—Scranton Bolt & Nut Co., Scranton, Pa., wants to purchase mills and bolt and nut equipment.

Heating Apparatus.—See "Electrical Machinery."

Heating Apparatus.—Office of the Commissioners, Washington, D. C.—Sealed proposals will be received until April 26 for constructing a hot-air or hot-blast steam-heating apparatus, with mechanical ventilating appliances combined with each system, for the Lovejoy school building. Blank form of proposals, together with all necessary information, can be obtained upon application therefor at the office of the Inspector of buildings of the District of Columbia. Usual rights reserved. Proposals must be inclosed in an envelope, sealed, and indorsed on the outside "Proposal for constructing a hot-air or hot-blast steam-heating apparatus, with mechanical ventilating appliances combined with each system, for the Lovejoy school building." John B. Wight, John W. Ross, Lansing H. Beach, Commissioners, D. C.

Incubators.—"Box No. 848," Charleston, W. Va., is in the market for incubators, brooders and poultry supplies; also single-comb brown Leghorn chickens and eggs, Plymouth Rock and bronze turkeys.

Ironworking Machinery.—Lasker & Sullivan, Birmingham, Ala., want to purchase stamping press.

Knitting Machinery.—Sumter Ice Manufacturing Co., Sumter, S. C., wants information regarding the cost of machinery, cost of operating and general information about knitting machinery for hosiery and underwear.

Laundry Machinery.—Ira D. Oliver, Union Springs, Ala., wants to correspond with manufacturers of steam-laundry machinery.

Lead.—See "Mining and Milling Equipment."

Mattress Machinery.—H. D. Cunningham, Pittsburg, Texas, wants to correspond with manufacturers of mattress machinery.

Mining and Milling Equipment.—Hot Springs Barytes Co., M. H. Dingee, treasurer, Lynchburg, Va., is in the market for two 100-horse-power boilers, cost of constructing a dam on Spring creek at Hot Springs, N. C.; twenty pairs Esopus millstones four feet in diameter or French burr stones; 20,000 pounds sheet lead, twelve pounds to foot, to be delivered at Hot Springs, N. C.

Mining Equipment.—The Baker Mining Co., Joe Baker, president, Sarcoxie, Mo., wants prices on pumps, engines and hoisters.

Oil Mill and Ginnery.—McCormick Cotton Oil Co., McCormick, S. C., wants bids on complete outfit for 20-ton cottonseed-oil mill and ginnery.

Paper Board.—Armstrong Berry Box Co., Velasco, Texas, wants addresses of manufacturers of paper board for making berry boxes, roll fifteen to twenty-five inches wide; state carload prices per ton.

Paving.—Separate sealed proposals, marked "Proposals to pave Pine street, from Lexington street to Saratoga street, with sheet asphalt," "Proposals to repair streets and bridges paved with sheet asphalt," "Proposals to pave Bush street, from Columbia avenue to the mouth of the Bush-street sewer, with cobblestone," "Proposals to pave Lovegrove alley, from Twenty-seventh street to Twenty-eighth street, with cobblestone," will be received by the board of award at the office of the mayor, Baltimore, Md., until May 10. Certified check for \$500 must accompany all bids except Lovegrove alley, where a check for \$50 will be required. Specifications and proposal sheets will be furnished on application at the city commissioner's office. Usual rights reserved; William W. Varney, city commissioner.

Plow-works Tools.—See "Foundry."

Poultry Supplies.—See "Incubators."

Presser.—Noell Bros.' Pants Co., Roxboro, N. C., wants to purchase a presser for fine pants.

Railway Equipment.—Peacock's Iron Works, Selma, Ala., wants prices (delivered) on light 36-inch-gauge locomotive, some 35-pound railroad iron and some second-hand logging cars.

Railway Equipment.—See "Electric Plant."

Roofing.—See "Building Materials."

Sewing Machines.—See "Textile Machinery."

Starch Machinery.—A. B. Hurst, De Land, Fla., wants to buy machinery for manufacturing starch from potatoes.

Sugar Mill.—E. B. Williams & Co., No. 339 Front street, Memphis, Tenn., want bids on machinery for sugar refinery with capacity of 600 barrels per day.

Telephone Equipment.—C. E. McKibben, manager, McDonough, Ga., wants information

regarding the construction of a telephone exchange.

Textile Machinery.—Harrison Robertson, Jr., Danville, Va., wants to purchase machinery for shirt and overall factory to be operated by electric power.

Textile Machinery.—W. T. Spaugh, Salem, N. C., wants prices on machinery for making twine, small cord and rope.

Tile Machinery.—Cambridge Tile Manufacturing Co., Covington, Ky., wants to correspond with manufacturers of machinery for making tiles.

Tobacco Machinery.—Cameron Tobacco Warehouse Co., George D. Dantzler, secretary, Cameron, S. C., wants to purchase machinery for tobacco warehouse.

Water Wheels.—See "Electrical Machinery."

Water Works.—Bids will be opened May 3 at 8 P. M. for the construction of water-works and electric-light plant at Winchester, Ind. Instruction and blank forms of proposals can be obtained and plans and specifications can be seen at office of Daniel W. Mead, engineer, 605 First National Bank Building, Chicago, or at office of A. L. Nichols, secretary, Winchester Water & Light

Co., Winchester. Bids will be asked for any or all of equipment, to include power station, stand tower, two 125-horse-power steam boilers, a 60-light 2000-candle-power arc machine and forty arc lamps, two power or deep-well pumps (capacity 350 gallons per minute), eight miles of pipe and specials, four to twelve insulators, sixty-three hydrants and forty valves, pipelaying, pole line and arc circuit, one or more wells.

Well-boring Machinery.—Victoria-Florida Phosphate Co., Newberry, Fla., wants boring machine for prospecting and boring wells.

Wire.—T. Shaw, Velasco, Texas, wants prices on brass wire for making bolting for corn mill.

Wire.—Imperial Wire, Iron & Roofing Co., Louisville, Ky., wants to communicate with manufacturers of wire.

Woodworking Machinery.—Wood Bros., 26½ Commerce street, Birmingham, Ala., want to correspond with manufacturers of machinery for making wooden skewers.

Woodworking Machinery.—Elberton Oil Mills, Elberton, Ga., wants to purchase a buzz planer, rip saw with adjustable table and a shaper.

GENERAL INDUSTRIAL NEWS.

Fire has damaged the works of Whitaker & Delaney at Tacony, Pa., to the extent of \$100,000.

The Eureka Fence Co. will manufacture this specialty at Richmond, Ind., with \$10,000 capital.

James H. Morris and others have purchased a site for a manufacturing plant at Pottstown, Pa.

The Western Gas Engine Co. has been formed at Mishawaka, Ind. W. W. Dodge may be addressed.

Henry Sonnett of East Palestine, Ohio, is interested in the proposed pottery to be built at Tiffin, Ohio.

The Dayton Folding Box Co., recently organized at Anderson, Ind., will manufacture both boxes and barrels.

Jerome Keeley of Marion, Pa., may be addressed relative to the Keystone Drop Forge Works, capitalized at \$50,000.

According to a dispatch from Watervliet, Mich., a syndicate has determined to erect a wallpaper factory at that place.

The Miami Cycle Co. of Middletown, O., is considering the construction of a branch factory in the Province of Ontario.

The Union Forging Co., recently formed at Union, N. Y., will have \$62,000 capital. Leroy S. White may be addressed.

The Hygela Ice Co. has been formed at Wilmington, Del., to manufacture ice by A. M. Carswell and others of that city.

It is announced that Messrs. Billings, Clapp & Co. have determined to build their proposed chemical works at Tiverton, R. I.

The Hyde Park Iron & Steel Co. of Hyde Park, Pa., it is understood, has let contracts for an additional sheet mill to its plant.

The Page Woven Wire Co. has begun work upon its plant at Monessen, Pa., which it is understood will employ about 1000 men.

David Hall of Lewes, Del., is a director in the Marshall Trust Co., capitalized at \$50,000 to manufacture surgical appliances.

The Illinois Terminal Co. of Chicago Heights, Ill., has let contracts for its buildings, which will consist of at least three in all.

The E. N. Welch Co. of Bristol, Conn., is preparing to build an addition to its plant, which will be three stories high and 200 feet long.

The Empire Smokeless Furnace Co. will have its office at 150 Nassau street, New York. W. H. Smith is president of the company.

Charles Frazer, William Hamilton and others have organized the Sterling Worsted Co. at Clinton, Mass., with \$50,000 capital stock.

The Whipple Bros. Co. of Westerly, R. I., has been formed to manufacture household utensils. F. E. Whipple is one of the directors.

The Oliver Coke & Furnace Co. is considering the idea of building a plant at Uniontown, Pa., to construct railroad cars for its own use.

The addition to be built by the Midvale Steel Co. to its plant at Nicetown, Pa., will be used for a machine shop and be 64x114 feet in size.

A dispatch from Granite City, Ill., is to the effect that the additions to be made to the plant of the National Stamping & Enam-

eling Co. will include eighteen new sheet mills.

The Co-operative Furniture Co. of Rockford, Ill., will manufacture furniture, with \$50,000 capital stock. August Wilson is one of the directors.

The Interstate Iron and Machine Works of West Duluth, Minn., has been negotiating to secure property at Oshkosh, Wis., for a plant in that city.

The Fenton Pottery Co., recently formed at Canton, Ohio, will manufacture pottery, with \$10,000 capital stock. F. H. Fenton may be addressed.

Samuel H. Harshman and others have organized the Harshman Shoe Manufacturing Co. at Harshman, Ohio. The company is capitalized at \$50,000.

The Palm Gas Engine Co. of Butler, Pa., it is reported, will utilize the works of Kreps Bros. at Greenville, Pa., for manufacturing gas engines.

The foundry to be built by the O. S. Kelly Co. of Springfield, Ohio, will have a capacity of forty tons daily. Work is about to begin upon the improvement.

It is reported that Messrs. Bamford Bros. of Belle Vernon, Pa., have decided to move their silk mill to Charleroi, Pa., where buildings will be erected.

P. F. Gutherie and others have formed the Yantocan Chemical Engine Co. to manufacture chemical engines, fire extinguishers, etc., at Nutley, N. J.

The Gong Bell Manufacturing Co. has been formed to make bells at East Hampton, Conn., with \$20,000 capital stock. E. C. Barton may be addressed.

The Pennsylvania Bolt and Nut Works at Lebanon, Pa., will construct an addition to its warehouses to be 75x160 feet in dimensions and two stories high.

John A. Bradley of 874 Broad street, Newark, N. J., is interested in the Macknet Grate Bar Co., capitalized at \$50,000 to manufacture furnace appliances.

The Kenny Manufacturing Co. has recently been formed at Minneapolis, Minn. It will make a specialty of patent bottles. Thomas F. Kenny may be addressed.

A dispatch from Portland, Ore., is to the effect that a stove factory to cost \$150,000 will soon be erected in that city. F. W. Isherwood may be addressed.

The Diamond Star Steel Co., which has been incorporated in Delaware, is capitalized at \$3,000,000. Horace H. Wallace, at Wilmington, is one of the directors.

The Pennsylvania Standard Paint Co., recently incorporated in Delaware, is capitalized at \$1,000,000. Lardner V. Morris of Bristol, Pa., is one of the directors.

The Sippi Electric & Machine Co. of Pater-son, N. J., has leased property to carry on its business of manufacturing engines, dynamos and motors, also silk machinery.

The Butte County Electric Co. has been formed at San Francisco, Cal., with \$500,000 capital stock by W. E. Palmer of San Francisco and W. H. Snow of Mill Valley, Cal.

A dispatch from Waltham, Mass., is to the effect that the American Waltham Manufacturing Co. has decided to install additional machinery, which will cost about \$14,000.

Frank W. Emerson of Pittsford, N. Y., may be addressed relative to the Emerson Manufacturing Co., formed to manufacture

supplies for drawing, with \$15,000 capital stock.

The Weston Electrical Instrument Co. of Newark, N. J., has secured a site for a plant at Waverly, in the same State, which will probably consist of a building 250 feet square.

There is a possibility that the city of Cleveland, O., will construct a factory for manufacturing school furniture. The board of education of that city is considering the matter.

A Des Moines (Ia.) dispatch is to the effect that the Carr-Adams Company has decided to construct its proposed works at a site secured on Seventh street, in Des Moines.

The Celluloid Starch Co., formed in New Jersey, will have its principal offices at East Orange at the building of the New Jersey Registration & Trust Co. It is capitalized at \$250,000.

It is announced that R. D. Kenny of 350 Bourse Building, Philadelphia, is engineer for the cement works, to be built near Easton, Pa., which will have a capacity of 2000 barrels a day.

A recent New Jersey Incorporation is the Double Duty Range Manufacturing Co., capitalized at \$100,000. It may be addressed care the New Jersey Corporation & Trust Co., Camden, N. J.

The Chandler Manufacturing Co. of Newark, N. J., informs the Manufacturers' Record that it will construct no buildings for the present, but will be in the market for machinery later on.

The Standard Scales Co. of Detroit, Mich., is preparing to secure buildings already erected for its plant. Thomas F. Comerford is president of the company, which is capitalized at \$150,000.

The Bethlehem Iron Co. has voted to lease its plant to the Bethlehem Steel Co., which has recently been formed, with \$15,000,000 capital. At the head of the steel company is Robert P. Linderman.

The Battle Creek Gold Mining Co. is a recent San Francisco corporation, capitalized at \$500,000. Among those interested are B. W. Snow of Mill Valley, Cal., and E. B. Denison of San Francisco.

A recent New York corporation is that of the Graef Motor Works, which will have its plant in Brooklyn. It is capitalized at \$250,000. Ernest W. Graef of 308 Livingston street is one of the directors.

There is a possibility that the plant of the Pullman Palace Car Co., located at Wilmington, Del., may be enlarged. The plant is used largely for repairs and is now being worked to its utmost capacity.

The Hudson River Tool Co. is a new organization at Kingston, N. Y., capitalized at \$15,000. It will manufacture implements of different kinds. Among those interested is David L. Wildrick of Kingston.

The Essex Union Water Co., recently formed in Union county, New Jersey, includes Frederick Green of Summit, N. J., where the principal office will be located. The company is capitalized at \$500,000.

The Vimotum Hydro-Carbon Co., recently incorporated in West Virginia, has been formed to manufacture motor carriages, using gasoline. Charles F. Morse of Rookery Building, Chicago, may be addressed.

A report is current that the Ajax Metal Co. of Philadelphia is preparing plans to erect brass works in Chicago and St. Louis which will be operated in competition with the present combination of brass manufacturers.

The Fairview Manufacturing Co. of Fairview, Ill., is reported as having decided to build a malleable-iron foundry, which will be 200x76 feet in size. It will make other alterations to the plant. T. T. Wood is manager.

The elevator to be built by the Great Northern Railroad Co. at West Superior, Wis., recently referred to in the Manufacturers' Record, will have a total capacity of 6,000,000 bushels, and, it is stated, will cost \$2,000,000.

The Rusden Machine Co. has been formed with \$100,000 capital stock to manufacture machinery at Warren, R. I. Among those interested are Frank M. Sayles of Pawtucket and George R. Thurber of Providence, R. I.

The Jefferson Beet Sugar Co., recently incorporated in New Jersey, will have its plant in the suburbs of Watertown, N. Y. It is capitalized at \$600,000, and includes A. H. Sawyer of Watertown and George E. Schull of Carthage, N. Y.

The American Carbide Lamp Co. of Philadelphia has been formed, with \$3,000,000 capital stock, for the purpose of manufacturing calcium carbide. L. S. Kaufman,

1326 Chestnut street, Philadelphia, is attorney for the company.

The Grand Rapids Brewing Co. has decided to erect a bottling works at Grand Rapids, Mich., which will cost about \$50,000. A portion of the contract, it is understood, has been let to Hauser, Hayden & Owen of the same city.

The Falk Company of Milwaukee, Wis., may erect works for constructing railroad-track equipment at some point in that city. Plans for three buildings have been prepared which will cost in all \$80,000. The plant will be operated by electric-power.

Another storage-battery company has been incorporated under the laws of West Virginia to manufacture this apparatus in New York. It is termed the Gould Storage Battery Co., and its attorney is Felix K. Jellinek of 30 Broad street, New York.

Francis H. Saylor of Pottstown, Pa., it is announced, has purchased the structural department of the Reading Iron Works for the New York Building Co. The latter company, it is understood, intends operating and possibly enlarging its present capacity.

Conrad L. Clothier, Jr., and George H. Johnson are interested in the Philadelphia Railway Track Equipment Co., recently formed in that city. It is announced that arrangements are being matured to erect the works in the suburbs of Philadelphia.

A recent New Jersey corporation is that of the Standard Heater Co., which has been formed by John G. Bennett and others, with \$100,000 capital stock. Its office for the present will be in the building of the New Jersey Corporation Trust Co. at Camden.

A dispatch from Bellefonte, Pa., is to the effect that M. B. Bitner of Williamsport, Pa., has been appointed architect for the proposed silk mill to be built at Bellefonte by parties at Paterson, N. J. The mill cost about \$50,000 and employs about 400 hands.

The Conneaut Iron Foundry of Conneaut, Ohio, will erect two buildings in addition to its present works, and has let contracts. About twenty-five horse-power will be used and machinery will be purchased. George Wood is one of the directors of the company.

It is understood that the Dells Paper Co. has determined to build a plant for manufacturing sulphite at Kaukauna, Wis., which will have a capacity of twenty tons daily. David R. Davis is president of the paper company, which is located at Eau Claire, Wis.

The Dexter Portland Cement Co., which has recently been chartered in Pennsylvania, it is stated, will have its principal offices at Nazareth, Pa. The company has secured about 1000 acres of land containing the materials for cement near the town mentioned.

The Munising Furnace Co., it is reported, has decided to construct a blast furnace at the town of this name in Michigan, which will have a capacity of 125 tons daily. The company is capitalized at \$250,000, and includes Henry H. Brown of Cleveland, O., and E. H. Scott of La Porte, Ind.

The Manila Gas & Oil Co. of Pittsburg, Pa., informs the Manufacturers' Record that it has secured about 3000 acres of oil and gas territory in Washington county, Pa. It is intended to develop this property at once. The company may be addressed at 322 Park Building, Pittsburg, Pa.

Henry E. Howland of New York and others are reported as interested in a company which proposes importing sisal grass from Mexico on an extensive scale. It will be baled by an improved process and brought into the United States, where it will be manufactured into rugs and mats.

Mr. W. D. Zehnder, president of the Scranton Bolt & Nut Co. of Scranton, Pa., writes that four buildings will be erected, which will include a mill, two factories and a warehouse. No contracts have been let as yet, and a full outfit of equipment will be required. About 800 horse-power will be developed.

The question of building the Georgian Bay canal has been revived, and according to a cablegram from London a syndicate has been formed of English capitalists for this purpose. Among those reported as interested is Sir Edward Thornton of London. The canal will cost several million dollars if constructed.

Recent losses by fire are as follows: Plant of the Saco River Lumber Co. at Biddeford, Maine, \$40,000; plant of the Central Oil & Gas Stove Co., Gardner, Maine, loss \$100,000; plant of the Globe Steam Heater Co. at North Wales, Pa., loss \$20,000; flour mill of Hagerstown Milling Co. at Hagerstown, Ind., loss \$20,000.

It is reported that the publishers of several of the New York newspapers have made arrangements to purchase a tract of

woodland near Millinocket, Maine, on which a mill will be erected, which will supply twenty-five carloads of paper daily. Among those reported as interested is W. R. Hearst of the New York Journal.

Mr. Seth A. Borden of the Parker Mill Co. of Fall River, Mass., writes the Manufacturers' Record that the cotton mill to be erected at Warren, R. I., will be 267x148 feet in size and three stories high. Contracts have been awarded to Messrs. Beattie & Wilcox of Providence. A full equipment of machinery will be purchased.

According to a dispatch from Johnstown, Pa., two of the furnaces which are to be erected by the Cambria Iron Co. will be the largest yet built in this country. Each will have a capacity of 500 tons daily, while a smaller furnace will turn out 100 tons. This will make a total output of over 1000 tons from these furnaces alone.

It is understood that the Madison Manufacturing Co. of Madison, Maine, has let a contract to Greenleaf & Doring of Lewiston, Maine, to construct a pulp mill which will cost \$350,000. It will include one one-story building 94x78 feet, also other buildings to be 64x24 and 76x64, a burning-house 100x54 and a finishing-room 165x70 feet.

The Lewis Motor Vehicle Co. of Philadelphia has elected E. Graham, president, and Thomas W. Symon and B. J. Woodward of Philadelphia, vice-presidents. The company includes a number of capitalists of Philadelphia and has been incorporated with \$5,000,000 capital stock. It controls the patents for motor carriages of George G. Lewis of Chicago.

According to a dispatch from Buffalo, N. Y., the Lackawanna Iron & Steel Co. of Scranton, Pa., is interested in the construction of a steel plant in the suburbs of Buffalo to cost \$15,000,000. It is stated that a company will be formed with this amount of capital, which will include New York and Buffalo interests, as well as the steel company mentioned.

Mr. P. W. Roberts, vice-president of the Pencoed Iron Works of Philadelphia, Pa., writes the Manufacturers' Record that the company can furnish no details at present relative to the steel plant which was recently referred to in these columns. It is understood that the company has purchased property for the plant near Norristown, Pa., and will manufacture steel billets.

The York Manufacturing Co. of York, Pa., writes the Manufacturers' Record that it has secured property for an addition to its present factory which will be 40x163 feet. The addition will be used for turning out charcoal, iron and gun-metal castings. The company will also add a malleable-iron foundry and a lumber shed. Altogether the company expects to spend about \$100,000 on these improvements. Contracts have not as yet been let.

A dispatch from Jeannette, Pa., states that local parties have taken \$35,000 worth of the stock of the Window Glass Co., which proposes building a plant in that town at a cost of about \$100,000. It will give employment to about 300 men and be operated by members of the Window Glass Workers' Association. It is also stated that another glass factory is to be erected at Brownsville, Pa. Simon Brown, president of the Glass Workers' Association, may be addressed at Pittsburg, Pa.

A dispatch from Duluth, Minn., is to the effect that the American Steel & Wire Co. has become extensively interested in the ore fields of the Mesaba district. Examinations have been made by experts in the employ of the company and it is announced that several extensive mining properties have been purchased. Some time ago the company bought what is known as the Zenith Line of steamships, consisting of five vessels, each valued at \$250,000. In addition to this fleet it has placed orders with a Chicago shipyard for two steel barges, each of which, it is claimed, will have a capacity of 7500 tons.

TRADE NOTES.

Wants Position in Southern Textile Mill. An experienced textile millman of Massachusetts is advertising in our columns that he desires to obtain a position in some Southern mill. The party in question has had long experience in cotton mills, as much as three years as superintendent and twenty years as carder, and the desire to live in a more healthful climate is the cause of changing location. Address "Carder," care of Manufacturers' Record.

American Foundrymen.—The American Foundrymen's Association will hold its third annual convention on May 16 to 19 in Pittsburg. Enjoyable and varied entertainments will be provided for both the

gentlemen and ladies attending this convention, and the expectations of a very large number are doubtless to be realized. Some timely papers and discussions on important questions arising in the foundry trade may be expected to be read and heard.

Contracts for Flour Mills.—The Wolf Company of Chambersburg, Pa., continues to supply its system of flour-milling machinery throughout the country. Among recent contracts was one for a complete 60-barrel mill at Duncans, S. C.; for a 50-barrel mill at Buckeytown, Md.; for a 100-barrel mill at Jansen, Neb.; for remodeling New Hamburg (Pa.) Mill to the gyrator system, forty barrels capacity; for a 40-barrel mill at Abbottstown, Pa.; for remodeling 100-barrel mill at Philadelphia to gyrator system, and for 30-barrel gyrator mill at Jarvisville, Va.

Writing Machines.—"Constructed of the finest material and workmanship, it is capable of doing the lightest office work or the heaviest manifolding, yet so durable that it will continue service under the most trying tests of daily office practice." In the foregoing words is summed up the principal features of the Manhattan typewriter, a writing machine that has an established and ever-increasing good reputation on the market. Messrs. H. L. Bean & Co. of Baltimore and North streets, Baltimore, Md., are selling agents for the machine for their section.

Joseph Dixon.—The annual meeting of the stockholders of the Joseph Dixon Crucible Co. was held at Jersey City on April 17. Out of a possible vote of 7345 shares, there were 7000 shares voted for the re-election of the old board, consisting of Edward F. C. Young, John A. Walker, Daniel T. Hoag, Richard Butler, William Murray, Alexander T. McGill and Joseph D. Bedle. President E. F. C. Young, Vice-President and Treasurer John A. Walker and Secretary George E. Long were re-elected by the directors. Judge Joseph D. Bedle was also re-elected as counsel.

Portland Cement.—Although the manufacture of Portland cement has been entered into largely in this country, and the heavy duty on the article, the demand for foreign Portland cement continues. Receipts of this cement in Southern ports have been even greater than heretofore, especially along the Gulf from Galveston to Savannah. Recently there came into Mobile three vessels carrying 12,000 barrels of Lagerdorfer German Portland cement, and three vessels carrying 7000 barrels of Belgian Portland cement. These cargoes were all handled by the Mobile Coal Co. of Mobile, Ala., the only firm in Mobile importing cement direct from the factories.

Electrical Apparatus.—The Western Electrical Supply Co. of St. Louis, Mo., is offering to the trade this season the well-known Emerson alternating fan, which has been before the public so many seasons that it will not be necessary to go into details in relation to its merits. The Emerson people have made numerous improvements on this fan in order to keep pace with the times. The many new features are fully described in the catalogue as furnished especially on these fan motors. The company is also again handling the Paragon fan motor, which met with much success last season; also solicits correspondence and inquiries for catalogues on this motor.

Nordyke & Marmon Flour Mills.—One of the most prominent builders of complete flour mills in the world is the Nordyke & Marmon Company of Indianapolis. Recent contracts contained orders for complete mills from all parts of the United States and from foreign countries. Brief reference may be made to the recent orders as follows: 10"x42" double-roller mill for Minnesota; roller cornmeal outfit for Jamaica, West Indies; 40-barrel mill complete for Durango, Mexico; changing mill to swing-sifter system at Jiminez, Chihuahua, Mexico; changing mill at Mason's Mills, Ky.; rice-milling equipment for Urapan Michiocoan, Mexico; changing 100-barrel mill at Martinsburg, W. Va., to swing-sifter system; complete 100-barrel mill at Leesburg, Va.; 40-barrel mill at Homer, Neb., and 9"x18" double-roller mill, change to swing-sifter system and increase capacity to 100 barrels of mill at Great Bend, Kan.

Incandescent Lamp Factory.—Eighteen years' experience in the manufacture of incandescent lamps certainly entitles one to the title of a pioneer in that line. Such a pioneer is Mr. John Kammer of Chicago, who is president of the John Kammer Company of 176-78 Indiana street, Chicago, Ill. The Kammer Company has a factory of the most complete equipment obtainable, and its

lamps have had a thorough trial by the public and proved their worth. The "New Rival" lamp was thoroughly tried last season and is now adopted by many large users and stations, which have given numerous testimonials of their quality and merit. The Kammer Company's lamps are made of the best crystal glass, of pleasing form, throughout hand-sealed (claimed to be much superior to the machine-sealed lamps and retaining the very high vacuum much better); the lamps retain their initial candle-power to the very last; no blackening of the bulb occurs, and the lamps do not become gaseous and hot. A trial order placed with this firm generally results in many repeated orders for larger quantities.

Patent Planished Jacket Iron.—The demand for the W. Dewees Wood Co.'s patent planished jacket iron for locomotive use has been coincident with the growth of transportation interests of this country. Years ago, before the late Mr. Wood invented his patent planished iron, the American locomotive builders used Russia iron jackets, recognizing their economy and general desirability above painted jackets used by European roads. But the advent of Wood's patent planished jacket iron gave America a jacket superior to Russia iron at a much lower cost, and its adoption followed. American railroad systems which use painted iron jackets may be counted upon the fingers of one hand, and the majority of these use jackets of Wood's planished iron for all passenger engines. It would appear that no two roads using painted jackets agree on the question of their economy, judging from anything that has ever reached the public at conventions or otherwise. The European painted locomotive jacket is heavier and much more expensively finished than is any similar American one, but yet, as between European painted jackets and those made of Wood's patent planished iron, there is no question as to the handsomer appearance, lower first cost and general economy of the American product.

Acorns and Great Oaks.—Great oaks from little acorns grow if the acorn is a good acorn and an oak acorn. This is the history of Merchant & Co., Inc., of Philadelphia, New York and Chicago. Mr. Clarke Merchant retired from the navy in 1865 and went into the metal business in a small way. From this beginning has sprung the great house of which he is now the head; his name is most closely associated with roofing plates, and it may safely be asserted that he has done more to protect buyers and users of tinplate in getting the best quality of these goods than any other one man in this country. The various brands of bright and tinplates produced by this company are too well known to require description; they also are large dealers in brass and copper goods, tinner's supplies and sheet iron of every character. They own and operate one of the largest smelting plants in Philadelphia, where they produce their various brands of solder, babbitt and newspaper metals, in all of which three classes of goods they have a very extensive trade. The specialties of Merchant & Co., Inc., are quite as widely and favorably known as their standard goods. These are the "Star" ventilator and "Spanish" tiles. The recent order of the United States government for nearly 1000 of these "Star" ventilators for our new territory in the South stamps them as being first-class in every respect. Every designer or owner of a new building would do well to communicate with this firm before deciding on the various details of their metal work.

New Pratt Laboratory.—There is now in course of erection at Atlanta, Ga., a two-story brick and stone building, 45x93 feet in dimension, intended as an addition to the extensive chemical laboratory and business of Mr. N. P. Pratt. The structure has been planned by Mr. G. L. Norman, and the contract for its construction was awarded to Mr. Jas. A. Wright at \$30,000. The basement will be well lighted and ventilated, and is to be utilized for certain chemical and physical apparatus. The Pratt chemical business will be incorporated as the N. P. Pratt Laboratory, the members of it being Messrs. N. P., A. W. and George L. Pratt, and the present efficient force of chemists and other workmen will be continued, with such other employees as may be necessary because of the new addition. It is claimed that the new corporation will be the only one of its kind south of Pittsburg occupying exclusively and owning its own building. Two distinct branches of technical industry will be conducted; provision has been made for large additions to the analytical and assaying departments. The activity in gold mining in the South has justified the installation of the latest improved equipments for assay work, which the company

will erect after the model of those in use by the United States at the mint in Philadelphia; in this department will be placed crushers, rolls, automatic samplers, concentrators, etc. The department of chemical engineering will be prosecuted with even greater energy than heretofore, especially in the matter of Mr. Pratt's sulphuric-acid patents.

Mysteries of the Injector.—It is said that for a time after injectors were first invented they were regarded with a certain amount of awe and suspicion by a great many engineers. A device which by the aid of say sixty pounds steam pressure would lift a column of water fifteen to twenty feet high and then force it into the boiler against sixty pounds pressure plus the weight of the water above the delivery point, appeared so much like a man lifting himself up by his bootstraps as to suggest the uncanny and supernatural. Angus Sinclair, editor of *Locomotive Engineering*, tells in one of his books how, many years ago, when injectors were first introduced on the railroads of Scotland, he and a number of fellow-workmen spent one Sunday in carefully taking an injector apart and searching for the hidden springs or other source of its power. Of course, none were found, and among some of the party the witches got the benefit of their absence. Great improvements have since been made in injectors, and surprising results are now obtained. For instance, the American Injector Co. says that it makes injectors which, by taking steam from one boiler at seventy-five pounds pressure, will deliver water into another boiler carrying 225 pounds of steam, or against three times as great a pressure as is used to operate the injector. This indicates a very intimate knowledge of the capabilities of the steam injector, and the maker may be pardoned if, in its enthusiasm, it presents in the advertisement on page 18 of this issue a picture of the Castle geyser in Yellowstone Park, which ejects a column of water 250 feet high, and refers to the fact that the U. S. injectors now in use deliver hotter and more water into steam boilers of the country than is ejected by all the geysers in Yellowstone Park.

The Towing Machine Again.—Salvage for towing a disabled ship into port is often more profitable than the freight earnings on a trip, while the loss entailed through failure to hold on to a disabled ship is most disappointing; this has been illustrated a number of times during the past winter on the Atlantic. We will not revamp the facts that nearly always are the same in these cases of losing tows, but reference will be made again to that most excellent piece of marine mechanism, the steam-towing machine, which enables ships to handle their disabled sister ships with advantage and surety of reaching port with them. The compact automatic equipment of the Shaw & Spiegler patent is manufactured by the American Ship Windlass Co., Frank S. Manton, agent, of Providence, R. I. Its distinctive feature is that by means of its driving and cushioning steam cylinders there is provided an elastic steam cushion without which the hawser would be continually straining and frequently breaking. The resistance of the tow is borne entirely by the steam pressure in the cylinders. The wire hawser is wound on a drum that is driven by a pinion gear on the crankshaft of the engine, which meshes with the gear on the drumshaft. The machine has a regulating, reducing steam valve, in which the opening is increased or diminished, according as the strain on the hawser increases or diminishes. The action of the machine is as follows: In a seaway, as the vessel pays off, thus increasing the strain on the hawser, the drum begins to revolve and to pay out the hawser; this action opens the regulating valve and increases the steam pressure in the cylinders, until the pressure is sufficient to equal the strain. Then if the strain decreases on the hawser, the pressure in the cylinders will revolve the drum and wind the hawser in. In this way the machine is prevented from paying out the whole of the hawser, and only enough is paid out to relieve the extra and momentary strain on the hawser, and thus prevent its injury or its breaking. The regulating valve is entirely automatic and requires no handling whatever. An independent admission valve is provided, by which steam may be admitted to the cylinders and the hawser lengthened or shortened.

Telephones.—A small catalogue, preliminary to a large one to follow later, has been issued by the Ericsson Telephone Co. of 20 Warren street, New York (to remove May 1 to 206 Broadway). The company manufactures and imports telephones, switchboards and supplies and will furnish catalogue on request.

FINANCIAL NEWS.

The *Manufacturers' Record* invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Arkansas Bankers' Convention.

At the annual convention of the bankers of Arkansas, held at Little Rock, several papers were read on topics of special interest to the bankers, and the following officers elected: President, W. Y. Foster of Hope; secretary, M. H. Johnson of Little Rock; treasurer, A. B. Colvin, Beebe; vice-presidents, John G. Fletcher of Little Rock, R. J. Stacy of Augusta, Charles McKee of Fordyce, W. R. Cheney of Paris, J. W. Underwood of Stuttgart, S. A. Pernot of Van Buren; executive council, W. Y. Foster, S. S. Faulkner, C. M. Rix, J. S. Pollock, George T. Sparks.

Planters' Compress Co. Stock.

The Planters' Compress Co., now operating throughout the South in the establishment of compresses for baling cotton under the Lowry patents, will increase its capital stock from \$7,500,000 to \$15,000,000. A foreign branch company has been formed under the title of the Indo-Egyptian Compress Co. to control the Lowry patents in India and Egypt. The Planters' Compress Co. has its main office at 89 State street, Boston, Mass.; its Southern office at Memphis, Tenn.

Another Baltimore Trust Company.

The Mortgage Trust Co. of Baltimore is the latest addition to the list of these corporations. According to a statement of one of the promoters, its capital stock is to be \$3,000,000, and it is to be modeled upon the plan of the English companies of this character. It will make a specialty of placing securities of various kinds on the market. The promoters include the banking firm of Messrs. Sperry, Jones & Co. of Baltimore.

New Corporations.

The Central Trust Co. has been formed at Paris, Ky., with \$25,000 capital, by John T. Hinton and others.

The Bank of Marlinton, N. C., has been organized by the election of H. M. McNeel, president, and R. Hunter, cashier.

Samuel Parker and others are organizing the proposed national bank at Beaumont, Texas. It will have a capital of \$100,000.

The Stotts City Bank of Stotts City, Mo., has been formed, with \$10,000 capital stock, by D. B. Jones of that town and others.

J. P. Withers has been elected president, and J. W. Blake, cashier, of the Grayson National Bank, recently organized at Sherman, Texas.

The Surety Trust Co., recently chartered in West Virginia, will, it is understood, have its offices at Wheeling. It has \$500,000 capital stock, and the directors include Charles Whitlock and W. W. Bristol of Chicago.

New Securities.

Messrs. Hinsch & Davis of Cincinnati have bought \$20,000 worth of the bonds of Georgetown, Ky., paying 102.78.

The city of Lexington, Ky., will probably vote on the question of issuing \$50,000 in bonds for sewerage purposes in the near future.

The town of Covington, Tenn., has asked for legislative authority to issue bonds for electric-light purposes. Address the town clerk.

The city of Danville, Va., will vote May 23 on the question of issuing \$100,000 in bonds for street improvements. The mayor will give further information.

The people of Brownsville, Tenn., will vote May 9 on the proposed issue of bonds for improvements. The issue will aggregate about \$40,000. Address the mayor.

The town of Big Stone Gap, Va., will place on the market an issue of \$25,000 in 6 per cent. bonds for water-works purposes. Rufus A. Ayers & Co. will receive bids.

Messrs. W. J. Hayes & Sons of Cleveland, Ohio, have purchased the issue of \$40,000 of 6 per cent. bonds of Pickens county, Alabama, at a premium of \$4293.

The Tennessee legislature is considering a bill authorizing Gibson county to issue bonds for a new courthouse. The county court may be addressed at Trenton, Tenn.

Jefferson county, Tennessee, may issue \$100,000 in bonds for road improvements if given authority by the legislature. The county court may be addressed at Dandridge, Tenn.

The city of Athens, Ga., will receive proposals until May 5 for the issue of \$100,000 in 4 per cent. improvement bonds to be floated. J. H. Rucker may be addressed.

The Tennessee legislature will probably authorize the town of Clarksville to sell \$20,000 worth of bonds for water-works purposes. The town clerk will give further information.

The city of Wilmington, N. C., has placed on the market \$150,000 worth of 4 per cent. refunding bonds, and proposals for them are invited. The mayor may be addressed.

The bill authorizing Lake county, Tennessee, to issue bonds for levee purposes will probably be passed by the State legislature. The county court will have charge of the issue, and may be addressed at Tiptonville, Tenn.

The issue of \$100,000 in bonds offered for sale by Knoxville, Tenn., remain unsold, although the date for the soliciting of bids has elapsed. The offers made were unsatisfactory, and it is understood the issue may again be advertised.

Greenville county, South Carolina, will sell its proposed bond issue, amounting to \$32,000, on June 15, and will receive bids until that date. They are to bear 4 per cent. interest. A Speegle, county clerk, may be addressed at Greenville.

The election to be held in Statesville, N. C., on May 1 to decide upon the question of issuing bonds for refunding purposes is now being advertised. The proposed issue will bear 6 per cent. interest and amount to about \$10,000. L. Harrill is mayor.

Union county, Tennessee, will probably place on the market an issue of \$50,000 in road bonds as soon as legislative authority has been secured. A bill to this effect has already passed the senate. The county court may be addressed at Maynardville, Tenn.

Messrs. W. J. Hayes & Sons of Cleveland have bought \$80,000 worth of 6 per cent. bonds issued by the town of Forsyth, Ga., paying 116 for them. This is an indication of the high value placed upon securities issued by Southern communities.

Messrs. E. D. Shepard & Co. of New York have purchased \$50,000 worth of 5 per cent. bonds of Charlotte, N. C. This firm has taken the entire issue of these bonds for water and sewer purposes, amounting in all to \$300,000. The last lot was sold to them at 115.

The Unique Power, Light & Water Co. of Christiansburg, Va., offers for sale \$10,000 worth of 6 per cent. bonds, which

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will be secured by an electric-light plant furnishing light to towns of Christiansburg and Cambria, Va., also water-power for various purposes. James Rigby at Christiansburg is president of the company.

Dividends and Interest.

The Graniteville Cotton Manufacturing Co. of Graniteville, S. C., has declared a dividend of 10 per cent.

Financial Notes.

The last statement of the Miners and Merchants' Bank of Lonaconing, Md., shows an increase in its deposits of \$22,000, or nearly 50 per cent., since April 5, 1898. The bank is now on a dividend basis equal to 5 per cent. on a capital of \$20,000.

Learn to Draw.—"Can You Read Drawing?" and "Learn to Draw" are the titles of two leaflets issued by the International Correspondence Schools of Scranton, Pa. Every first-class mechanic should know how to read drawings and to make them.